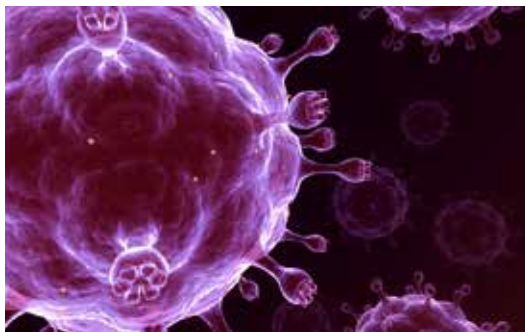


THE ESSENTIALS OF  
LIFE SCIENCE RESEARCH  
**GLOBALY DELIVERED™**

## Genuine Nucleics



**THE ESSENTIALS  
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RESEARCH  
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DELIVERED™**

## ATCC® Genuine Nucleics

The extraction, preparation, and quality control of nucleic acids can often require extensive amounts of time, labor, and expense. This is particularly true when handling cultures that require advanced biological safety procedures, fastidious culturing conditions, or extensive incubation periods.

Save time and avoid the hassle with ATCC Genuine Nucleics prepared from well-characterized, authenticated ATCC Genuine Cultures® and cell lines. Browse our expansive collection of nucleic acid preparations, including:

- Genomic nucleic acids from cell lines and microorganisms
- Synthetic DNA and RNA
- Plasmid DNA from molecularly cloned viruses
- Certified reference materials

Each ATCC preparation of high-quality DNA and RNA is isolated under aseptic conditions to prevent cross-contamination. Further, batches are evaluated for integrity, purity, and quality by several methods, including:

- Agarose gel electrophoresis
- Spectrophotometry
- Polymerase chain reaction
- Sequence analysis of conserved genomic regions
- Short tandem repeat analysis

Let ATCC help you get your research moving faster with ATCC Genuine Nucleics!

### Availability of nucleic acids

Some of the nucleic acids referenced in this guide are not available for international distribution, including those from organisms known to produce toxins. Visit us online at [www.atcc.org](http://www.atcc.org) to check the availability of specific nucleic acids in certain geographical locations.

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# GENOMIC DNA FROM BACTERIA & ARCHAEA

The Bacteria and Archaea domains each encompass a large, diverse group of microorganisms found ubiquitously throughout the world. These organisms are of clinical relevance as a number of bacterial species are human pathogens, causing a variety of complications associated with enteric, respiratory, blood-borne, and vector-borne disease. Additionally, bacteria and archaea are of ecological importance as they play key roles in the carbon, nitrogen, and sulfur cycles. Here, we provide a full listing of available nucleic acid preparations extracted from archaea and bacteria in the ATCC® Bacteriology Collection.

| ATCC® No.*  | Source Organism                                      | Strain        | Type Strain | Sequenced Genome |
|-------------|--|---------------|-------------|------------------|
| 23206D      | <i>Acholeplasma laidlawii</i>                        | PG8           | Y           | Y                |
| 14780D      | <i>Achromobacter xerosis</i>                         | IMRU 134      | Y           |                  |
| 43068D-5    | <i>Acidothermus cellulolyticus</i>                   | 11B           | Y           | Y                |
| 17978D-5    | <i>Acinetobacter baumannii</i>                       | 5377          |             | Y                |
| 19606D-5    | <i>Acinetobacter baumannii</i>                       | 2208          | Y           |                  |
| BAA-1710D-5 | <i>Acinetobacter baumannii</i>                       | AYE           |             | Y                |
| 27088D-5    | <i>Actinobacillus pleuropneumoniae</i>               | 4074          | Y           | Y                |
| 55618D-5    | <i>Actinobacillus succinogenes</i>                   | 130Z          | Y           | Y                |
| 12104D-5    | <i>Actinomyces naeslundii</i>                        | 279           | Y           |                  |
| 7966D-5     | <i>Aeromonas hydrophila</i> subsp. <i>hydrophila</i> | RH 250        | Y           | Y                |
| 700685D-5   | <i>Aggregatibacter actinomycetemcomitans</i>         | HK1651        |             | Y                |
| BAA-621D-5  | <i>Albidiferax ferrireducens</i>                     | T118          | Y           | Y                |
| 8750D-5     | <i>Alcaligenes faecalis</i> subsp. <i>faecalis</i>   | 16            | Y           |                  |
| 700601D-5   | <i>Aliivibrio fischeri</i>                           | ES114         |             | Y                |
| 29413D-5    | <i>Anabaena variabilis</i>                           | IUCC 1444     |             | Y                |
| 9321D-5     | <i>Anaerococcus prevotii</i>                         | PC 1          | Y           | Y                |
| BAA-259D-5  | <i>Anaeromyxobacter dehalogenans</i>                 | 2CP-C         |             | Y                |
| 19411D      | <i>Arcanobacterium pyogenes</i>                      | 84            | Y           |                  |
| 49558D-5    | <i>Archaeoglobus fulgidus</i>                        | VC16          | Y           | Y                |
| BAA-1386D-5 | <i>Arthrobacter aurescens</i>                        | TC1           |             | Y                |
| 700700D-5   | <i>Arthrobacter chlorophenolicus</i>                 | A6            | Y           | Y                |
| 49626D-5    | <i>Atopobium rimae</i>                               | VPI D140H-11A | Y           | Y                |
| 10876D-5    | <i>Bacillus cereus</i>                               | NRR L B-569   |             | Y                |
| 10987D-5    | <i>Bacillus cereus</i>                               | NRS 248       |             | Y                |
| 14579D-5    | <i>Bacillus cereus</i>                               | 971           | Y           | Y                |
| BAA-125D-5  | <i>Bacillus halodurans</i>                           | C-125         |             | Y                |
| 14580D-5    | <i>Bacillus licheniformis</i>                        | 46            | Y           | Y                |
| 700615D-5   | <i>Bacillus selenitireducens</i>                     | MLS10         | Y           | Y                |
| 23857D-5    | <i>Bacillus subtilis</i>                             | 168           |             | Y                |
| 35646D-5    | <i>Bacillus thuringiensis</i>                        | USDA HD522    |             | Y                |
| 25285D-5    | <i>Bacteroides fragilis</i>                          | VPI 2553      | Y           | Y                |

\*ATCC catalog numbers with DQ are quantitative products



ATCC offers bacterial genomic DNA in either the frozen or dried form. Dried bacterial genomic DNA must be resuspended in an appropriate buffer or liquid, such as molecular-grade water (ATCC® No. 60-2450) or TE buffer.

| ATCC® No.*  | Source Organism                                      | Strain            | Type Strain | Sequenced Genome |
|-------------|--|-------------------|-------------|------------------|
| 29148D-5    | <i>Bacteroides thetaiotaomicron</i>                  | E50               | Y           | Y                |
| 8482D-5     | <i>Bacteroides vulgatus</i>                          | NCTC 11154        | Y           | Y                |
| 35685D-5    | <i>Bartonella bacilliformis</i>                      | KC583             | Y           | Y                |
| 49882D-5    | <i>Bartonella henselae</i>                           | Houston-1         | Y           | Y                |
| 15703D-5    | <i>Bifidobacterium adolescentis</i>                  | E194a (Variant a) | Y           | Y                |
| 15700D-5    | <i>Bifidobacterium breve</i>                         | S1 (Variant a)    | Y           | Y                |
| 15697D-5    | <i>Bifidobacterium longum</i> subsp. <i>infantis</i> | S12               | Y           | Y                |
| MP-10       | Big-Six <i>Escherichia coli</i> Genomic DNA Panel    |                   |             |                  |
| 27340D-5    | <i>Blautia producta</i>                              | VPI 4299 [2396]   | Y           |                  |
| BAA-588D-5  | <i>Bordetella bronchiseptica</i>                     | RB50              |             | Y                |
| BAA-587D-5  | <i>Bordetella parapertussis</i>                      | 12822             |             | Y                |
| 9797D-5     | <i>Bordetella pertussis</i>                          | 18323             | Y           |                  |
| BAA-589DQ   | <i>Bordetella pertussis</i>                          | Tohama 1          |             | Y                |
| 35210D-5    | <i>Borrelia burgdorferi</i>                          | B31               | Y           | Y                |
| 43885D-5    | <i>Brachybacterium faecium</i>                       | NCIB 9860         | Y           | Y                |
| 9175D       | <i>Brevibacterium aurantiacum</i>                    | KC                |             | Y                |
| BAA-244D-5  | <i>Burkholderia ambifaria</i>                        | AMMD              | Y           | Y                |
| 25416D-5    | <i>Burkholderia cepacia</i>                          | UCB 717           | Y           |                  |
| 17616D-5    | <i>Burkholderia cepecia</i>                          | 249               |             | Y                |
| 700544D-5   | <i>Burkholderia graminis</i>                         | C4D1M             | Y           | Y                |
| 700388D-5   | <i>Burkholderia thailandensis</i>                    | E264              | Y           | Y                |
| 51982D-5    | <i>Butyrivibrio proteoclasticus</i>                  | B316              | Y           |                  |
| BAA-1061D-5 | <i>Campylobacter coli</i>                            | RM2228            |             | Y                |
| BAA-1457D-5 | <i>Campylobacter concisus</i>                        | 13826             |             | Y                |
| BAA-1459D-5 | <i>Campylobacter curvus</i>                          | RM407             |             | Y                |
| 33236D-5    | <i>Campylobacter gracilis</i>                        | FDC 1084          | Y           |                  |
| BAA-381D-5  | <i>Campylobacter hominis</i>                         | CH001A            | Y           | Y                |
| BAA-1062D-5 | <i>Campylobacter</i> subsp. <i>jejuni</i>            | RM 1221           |             | Y                |
| BAA-1458D-5 | <i>Campylobacter jejuni</i> subsp. <i>doylei</i>     | 269.97            |             | Y                |
| 700819D-5   | <i>Campylobacter jejuni</i> subsp. <i>jejuni</i>     | 5636/77 LuciH     |             | Y                |
| BAA-1060D-5 | <i>Campylobacter lari</i>                            | RM2100            |             | Y                |
| 33238D-5    | <i>Campylobacter rectus</i>                          | FDC 371           | Y           | Y                |
| BAA-1059D-5 | <i>Campylobacter upsaliensis</i>                     | RM 3195           |             | Y                |
| 33624D-5    | <i>Capnocytophaga gingivalis</i>                     |                   | Y           | Y                |
| 19089D-5    | <i>Caulobacter vibrioides</i>                        | CB 15             |             | Y                |
| 482D-5      | <i>Cellulomonas flavigena</i>                        | NRS 134           | Y           | Y                |
| 43595D-5    | <i>Chitinophaga pinensis</i>                         | UQM 2034          | Y           | Y                |
| 29366D-5    | <i>Chloroflexus aurantiacus</i>                      | J-10-fl           | Y           | Y                |
| BAA-138D-5  | <i>Chromohalobacter salexigens</i>                   | 1H11              | Y           | Y                |
| 8090D       | <i>Citrobacter freundii</i>                          |                   | Y           |                  |

\*ATCC catalog numbers with DQ are quantitative products

Looking for Chlamydia strains? Try looking in the virology section of this brochure! While Chlamydia and Rickettsia are bacterial in nature, they are considered to be obligate intracellular pathogens that require a host. Due to their explicit growth requirements, the ATCC Animal Virology Collection manages the expansion, preservation, and authentication of strains belonging to these Genera.

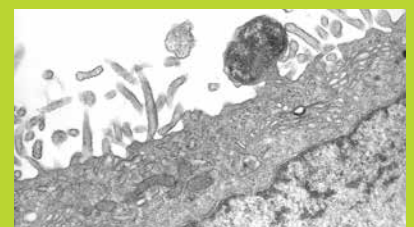


Image of *Rickettsia* budding from a mouse cell. Photo courtesy of Dr. Ed Ewing, CDC.

| ATCC® No.*  | Source Organism  | Strain                  | Type Strain | Sequenced Genome |
|-------------|--|-------------------------|-------------|------------------|
| BAA-895D-5  | <i>Citrobacter koseri</i>                              | 4225-83                 |             | Y                |
| 824D-5      | <i>Clostridium acetobutylicum</i>                      |                         | Y           | Y                |
| 9689D-5     | <i>Clostridium difficile</i>                           | 90556-M6S               | Y           |                  |
| BAA-1382DQ  | <i>Clostridium difficile</i>                           | 630                     |             | Y                |
| 14880D      | <i>Clostridium glycolicum</i>                          |                         | Y           |                  |
| 13124D-5    | <i>Clostridium perfringens</i>                         | NCTC 8237               | Y           | Y                |
| 700394D-5   | <i>Clostridium phytofermentans</i>                     | ISDg                    | Y           | Y                |
| 3584D       | <i>Clostridium sporogenes</i>                          | 388                     | Y           |                  |
| 27405D-5    | <i>Clostridium thermocellum</i>                        | 157                     | Y           | Y                |
| BAA-681D-5  | <i>Colwellia psychrerythraea</i>                       | 34H                     |             | Y                |
| 700441D-5   | <i>Comamonas testosteroni</i>                          | JS42                    |             | Y                |
| 700971D-5   | <i>Corynebacterium diphtheriae</i>                     | NCTC 13129              |             | Y                |
| 13032D-5    | <i>Corynebacterium glutamicum</i>                      | 534                     | Y           | Y                |
| BAA-894D-5  | <i>Cronobacter sakazakii</i>                           | 10/1/2001               |             | Y                |
| 700683D-5   | <i>Cryptobacterium curtum</i>                          | 3-Dec                   | Y           | Y                |
| 43123D-5    | <i>Cupriavidus metallidurans</i>                       | CH34                    | Y           | Y                |
| 17699D-5    | <i>Cupriavidus necator</i>                             | H16                     |             | Y                |
| 51142D-5    | <i>Cyanotheca</i> sp.                                  | BH68                    |             | Y                |
| 33406D-5    | <i>Cytophaga hutchinsonii</i>                          | D465                    | Y           | Y                |
| 13939D-5    | <i>Deinococcus radiodurans</i>                         | RI (smooth)             | Y           |                  |
| BAA-816D    | <i>Deinococcus radiodurans</i>                         | R1                      |             | Y                |
| 43914D-5    | <i>Desulfohalobium autotrophicum</i>                   | DSM 3382 [HRM2]         | Y           | Y                |
| 27774D-5    | <i>Desulfovibrio</i> subsp. <i>desulfuricans</i>       | MB                      |             | Y                |
| 33405D      | <i>Desulfovibrio oxamicus</i>                          | Monticello 2            | Y           |                  |
| 14822D-5    | <i>Desulfovibrio salexigens</i>                        | NCIB 8403               | Y           | Y                |
| 700827D-5   | <i>Dyadobacter fermentans</i>                          | NS114                   | Y           | Y                |
| 25559D-5    | <i>Eggerthella lenta</i>                               | 1899B                   | Y           | Y                |
| 33958D      | <i>Elizabethkingia miricola</i>                        |                         |             |                  |
| 51124D-5    | <i>Ensifer meliloti</i>                                | Rm1021                  |             | Y                |
| 15038D-5    | <i>Enterobacter aerogenes</i>                          | F50                     |             |                  |
| 23373D-5    | <i>Enterobacter cloacae</i>                            | ICPB ED105              | Y           |                  |
| 13047D-5    | <i>Enterobacter cloacae</i> subsp. <i>cloacae</i>      | NCDC 279-56             | Y           |                  |
| 9912D-5     | <i>Enterobacter nimipressuralis</i>                    | 41-173                  | Y           |                  |
| 700802D-5   | <i>Enterococcus faecalis</i>                           | V583                    |             | Y                |
| 29212Q-FZ   | <i>Enterococcus faecalis</i> Quantitative DNA Standard |                         |             |                  |
| BAA-472D-5  | <i>Enterococcus faecium</i>                            | TEX16                   |             | Y                |
| 10541D-5    | <i>Enterococcus hirae</i>                              | FDA M19                 |             |                  |
| 10798D-5    | <i>Escherichia coli</i>                                | K-12                    |             |                  |
| 11229D-5    | <i>Escherichia coli</i>                                | AMC 198                 |             |                  |
| 25922D-5    | <i>Escherichia coli</i>                                | FDA strain Seattle 1946 |             |                  |
| 700926DQ    | <i>Escherichia coli</i>                                | MG1655                  |             | Y                |
| 700927D-5   | <i>Escherichia coli</i>                                | EDL 933                 |             | Y                |
| 700928D-5   | <i>Escherichia coli</i>                                | CFT073                  |             | Y                |
| 8739DQ      | <i>Escherichia coli</i>                                | Crooks                  |             | Y                |
| BAA-2192D-5 | <i>Escherichia coli</i>                                | 99-3311                 |             | Y                |
| BAA-2193D-5 | <i>Escherichia coli</i>                                | 2000-3039               |             | Y                |
| BAA-2196D-5 | <i>Escherichia coli</i>                                | 2003-3014               |             | Y                |
| BAA-2215D-5 | <i>Escherichia coli</i>                                | 2006-3008               |             | Y                |
| BAA-2219D-5 | <i>Escherichia coli</i>                                | 2002-3211               |             | Y                |

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| ATCC® No.*  | Source Organism  | Strain          | Type Strain | Sequenced Genome |
|-------------|--|-----------------|-------------|------------------|
| BAA-2326D-5 | <i>Escherichia coli</i>                                | TY-2482         |             | Y                |
| 35401D-5    | <i>Escherichia coli</i>                                | H10407          |             |                  |
| 35638D-5    | <i>Escherichia coli</i>                                | NM 538          |             |                  |
| 43895D-5    | <i>Escherichia coli</i>                                | CDC EDL 933     |             |                  |
| BAA-460D-5  | <i>Escherichia coli</i>                                | RIMD 0509952    |             | Y                |
| 35469D-5    | <i>Escherichia fergusonii</i>                          | CDC 0568-73     | Y           | Y                |
| 8486D-5     | <i>Eubacterium limosum</i>                             | NCIB 9763       | Y           |                  |
| BAA-1283D-5 | <i>Exiguobacterium</i> sp.                             | AT1b            |             | Y                |
| 17061D-5    | <i>Flavobacterium johnsoniae</i>                       | MYX.1.1.1       | Y           | Y                |
| 49511D-5    | <i>Flavobacterium psychrophilum</i>                    | TG 02/86        |             | Y                |
| 25017D-5    | <i>Francisella</i> subsp. <i>philomiragia</i>          | O#319-036       |             | Y                |
| 25586D-5    | <i>Fusobacterium nucleatum</i> subsp. <i>nucleatum</i> | 1612A           | Y           | Y                |
| 49145D-5    | <i>Gardnerella vaginalis</i>                           | AmMS 117        |             |                  |
| 10379D-5    | <i>Gemella haemolysans</i>                             | NCTC 12968      | Y           | Y                |
| 12980D-5    | <i>Geobacillus stearothermophilus</i>                  | NCA 26          | Y           |                  |
| 53774D-5    | <i>Geobacter metallireducens</i>                       | GS-15           | Y           | Y                |
| 51573D-5    | <i>Geobacter sulfurreducens</i>                        | PCA             | Y           | Y                |
| 25078D-5    | <i>Geodermatophilus obscurus</i>                       | D-20            | Y           | Y                |
| 29082D-5    | <i>Gloeobacter violaceus</i>                           | PCC 7421        |             | Y                |
| 49037D-5    | <i>Gluconacetobacter diazotrophicus</i>                | PAI 5           | Y           | Y                |
| 621HD-5     | <i>Gluconobacter oxydans</i>                           |                 |             | Y                |
| 25592D-5    | <i>Gordonia bronchialis</i>                            | 3410 (Ohba)     | Y           | Y                |
| BAA-1260D-5 | <i>Granulobacter bethesdensis</i>                      | CGDNIH1         |             | Y                |
| 700724D-5   | <i>Haemophilus ducreyi</i>                             | 35000HP         |             | Y                |
| 51907D      | <i>Haemophilus influenzae</i>                          | Rd [KW20]       |             | Y                |
| 51873D-5    | <i>Hafnia alvei</i>                                    | HER 1272 [1672] |             |                  |
| 700560D     | <i>Halanaerobium lacusrosei</i>                        | H200            | Y           |                  |
| 700875D     | <i>Haloarcula argentinensis</i>                        | arg-1           | Y           |                  |
| 43049D-5    | <i>Haloarcula marismortui</i>                          | DSM 3752        | Y           | Y                |
| 700874D-5   | <i>Haloarcula mukohataei</i>                           | arg-2           | Y           | Y                |
| 700850D     | <i>Haloarcula quadrata</i>                             | 80103011        | Y           |                  |
| 33170D      | <i>Halobacterium salinarum</i>                         | 63-R2           | Y           |                  |
| 33171D      | <i>Halobacterium salinarum</i>                         | 91-R6           | Y           |                  |
| 700922D-5   | <i>Halobacterium salinarum</i>                         | NRC-1           |             | Y                |
| 700876D-5   | <i>Halobaculum gomorrense</i>                          | DS2807          | Y           |                  |
| 29605D      | <i>Haloferax volcanii</i>                              | DS2             | Y           | Y                |
| 700274D-5   | <i>Halogeometricum borinquense</i>                     | PR3             | Y           | Y                |
| 43504D-5    | <i>Helicobacter pylori</i>                             | RPH 13487       | Y           |                  |
| 700392DQ    | <i>Helicobacter pylori</i>                             | 26695           |             | Y                |
| 700824D-5   | <i>Helicobacter pylori</i>                             | J99             |             | Y                |
| 51547D-5    | <i>Heliobacterium modesticaldum</i>                    | Ice1            | Y           | Y                |
| 15444D-5    | <i>Hyphomonas neptunium</i>                            | 14-15           | Y           | Y                |
| BAA-735D-5  | <i>Idiomarina loihiensis</i>                           | L2-TR           | Y           | Y                |
| 14870D-5    | <i>Jonesia denitrificans</i>                           | 55134           | Y           | Y                |
| BAA-149D-5  | <i>Kineococcus radiotolerans</i>                       | SRS30216        | Y           | Y                |
| 700324D     | <i>Klebsiella oxytoca</i>                              | LBM 90.11.033   |             |                  |
| BAA-1705D-5 | <i>Klebsiella pneumoniae</i>                           | ART 2008133     |             |                  |
| BAA-1706D-5 | <i>Klebsiella pneumoniae</i>                           | AIS 2007023     |             |                  |
| BAA-2146D-5 | <i>Klebsiella pneumoniae</i>                           | 1000527, 7561   |             |                  |

\*ATCC catalog numbers with DQ are quantitative products

| ATCC® No.*  | Source Organism  | Strain         | Type Strain | Sequenced Genome |
|-------------|--|----------------|-------------|------------------|
| 700603D-5   | <i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i>        | K6             |             |                  |
| 700721D-5   | <i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i>        | MGH78578       |             | Y                |
| 9341D-5     | <i>Kocuria rhizophila</i>                                    | DC2201         |             | Y                |
| 4357D-5     | <i>Lactobacillus acidophilus</i>                             | Pak            |             |                  |
| 367D-5      | <i>Lactobacillus brevis</i>                                  | 118-8          |             | Y                |
| 334D-5      | <i>Lactobacillus casei</i>                                   |                |             | Y                |
| 11842D-5    | <i>Lactobacillus delbrueckii</i> subsp. <i>bulgaricus</i>    | Lb14           | Y           | Y                |
| BAA-365D    | <i>Lactobacillus delbrueckii</i> subsp. <i>bulgaricus</i>    | Lb-18          |             | Y                |
| 9649D-5     | <i>Lactobacillus delbrueckii</i> subsp. <i>delbrueckii</i>   | 730            | Y           |                  |
| 33323D-5    | <i>Lactobacillus gasseri</i>                                 | 63 AM          | Y           | Y                |
| 7995D       | <i>Lactobacillus helveticus</i>                              | USDA Lb7       |             |                  |
| 25258D      | <i>Lactobacillus jensenii</i>                                | 62G            | Y           |                  |
| 8014D-5     | <i>Lactobacillus plantarum</i>                               | 17-5           |             |                  |
| BAA-793D-5  | <i>Lactobacillus plantarum</i>                               | NCIMB 8826     |             |                  |
| 23272D-5    | <i>Lactobacillus reuteri</i>                                 | F275           | Y           | Y                |
| 21052D-5    | <i>Lactobacillus rhamnosus</i>                               |                |             |                  |
| 19435D-5    | <i>Lactococcus lactis</i> subsp. <i>lactis</i>               | OJ             | Y           |                  |
| 35292D-5    | <i>Legionella anisa</i>                                      | WA-316-C3      | Y           |                  |
| 33462D-5    | <i>Legionella longbeachae</i>                                | Long Beach 4   | Y           |                  |
| 33152D-5    | <i>Legionella pneumophila</i> subsp. <i>pneumophila</i>      | Philadelphia-1 | Y           | Y                |
| BAA-1198D-5 | <i>Leptospira interrogans</i> serovar Copenhageni            | Fiocruz L1-130 |             | Y                |
| 14201D-5    | <i>Leptotrichia buccalis</i>                                 | C-1013-b       | Y           | Y                |
| 8293D-5     | <i>Leuconostoc mesenteroides</i> subsp. <i>mesenteroides</i> | 37Y            | Y           | Y                |
| BAA-680D    | <i>Listeria innocua</i>                                      | CLIP 11262     |             | Y                |
| BAA-678D-5  | <i>Listeria</i> subsp. <i>ivanovii</i>                       | PAM 55         |             | Y                |
| 19114D-5    | <i>Listeria monocytogenes</i>                                | Li 23          |             |                  |
| 19115D-5    | <i>Listeria monocytogenes</i>                                | Li 2           |             |                  |
| BAA-679D-5  | <i>Listeria monocytogenes</i>                                | EGDe           |             | Y                |
| 35967D-5    | <i>Listeria seeligeri</i>                                    | 1120           | Y           |                  |
| 35897D-5    | <i>Listeria welshimeri</i> serovar 6b                        | SLCC5334       | Y           | Y                |
| 700264D-5   | <i>Magnetospirillum</i> sp.                                  | AMB-1          |             | Y                |
| BAA-410D    | <i>Mannheimia haemolytica</i>                                | SH789          |             | Y                |
| 700491D-5   | <i>Marinobacter aquaeolei</i>                                | VT8            | Y           | Y                |
| 35948D-5    | <i>Meiothermus ruber</i>                                     | 21             | Y           | Y                |
| 33453D-5    | <i>Mesoplasma florum</i>                                     | L1             | Y           | Y                |
| BAA-1280D-5 | <i>Methanococcus aeolicus</i>                                | Nankai-3       | Y           | Y                |
| 43000D-5    | <i>Methanococcus maripaludis</i>                             | JJ             | Y           | Y                |
| BAA-1333D-5 | <i>Methanococcus maripaludis</i>                             | C5             |             | Y                |
| 35089D-5    | <i>Methanococcus vannielii</i>                               | SB             | Y           | Y                |
| BAA-1334D-5 | <i>Methanococcus voltae</i>                                  | A3             |             | Y                |
| 43576D-5    | <i>Methanocorpusculum labreanum</i>                          | Z              | Y           | Y                |
| 35101D-5    | <i>Methanoculleus marisnigri</i>                             | JR1            | Y           | Y                |
| 35395D-5    | <i>Methanosarcina acetivorans</i>                            | C2A            | Y           | Y                |
| BAA-159D-5  | <i>Methanosarcina mazei</i>                                  | Go1            |             | Y                |
| 27890D-5    | <i>Methanospirillum hungateii</i>                            | JF-1           | Y           | Y                |
| BAA-1232D-5 | <i>Methylobium petroleiphilum</i>                            | PM1            | Y           | Y                |
| 51484D      | <i>Methylobacillus flagellatus</i>                           | KT             | Y           | Y                |
| 14718D-5    | <i>Methylobacterium extorquens</i>                           | AMI            |             | Y                |
| 27886D-5    | <i>Methylobacterium organophilum</i>                         | XX             | Y           |                  |

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| ATCC® No.* | Source Organism   | Strain                   | Type Strain | Sequenced Genome |
|------------|---|--------------------------|-------------|------------------|
| 27329D-5   | <i>Methylobacterium radiotolerans</i>                     | O-1                      | Y           | Y                |
| 19069D-5   | <i>Methylococcus capsulatus</i>                           |                          | Y           |                  |
| 33009D-5   | <i>Methylococcus capsulatus</i>                           | Bath                     |             | Y                |
| 4698D-5    | <i>Micrococcus luteus</i>                                 |                          | Y           | Y                |
| 39073D-5   | <i>Moorella thermoacetica</i>                             |                          |             | Y                |
| 25240D-5   | <i>Moraxella catarrhalis</i>                              | N9                       |             |                  |
| 35200D     | <i>Morganella morganii</i> subsp. <i>morganii</i>         | AM-15                    |             |                  |
| BAA-695D-5 | <i>Moryella indoligenes</i>                               | MDA 2477                 |             |                  |
| 19977D-5   | <i>Mycobacterium abscessus</i>                            | L948                     | Y           | Y                |
| BAA-968D-5 | <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i> | K-10                     |             | Y                |
| BAA-935D-2 | <i>Mycobacterium bovis</i>                                | AF 2122/97               |             | Y                |
| 35760D-5   | <i>Mycobacterium goodii</i>                               | Puntal                   |             |                  |
| BAA-535D-5 | <i>Mycobacterium marinum</i>                              | M                        |             | Y                |
| 700084D-5  | <i>Mycobacterium smegmatis</i>                            | MC2 155                  |             | Y                |
| 25177DQ    | <i>Mycobacterium tuberculosis</i>                         | H37Ra                    |             | Y                |
| 25618D-2   | <i>Mycobacterium tuberculosis</i>                         | H37Rv                    |             | Y                |
| 27294D-2   | <i>Mycobacterium tuberculosis</i>                         | TMC 102                  | Y           |                  |
| 23838D     | <i>Mycoplasma arginini</i>                                | G230                     | Y           |                  |
| 19611D     | <i>Mycoplasma arthritidis</i>                             | Preston                  | Y           |                  |
| 35734D     | <i>Mycoplasma bovis</i>                                   | TMC 1011 [BCG Pasteur]   |             | Y                |
| 25523D     | <i>Mycoplasma bovis</i>                                   | Donetta PG45             | Y           |                  |
| 19989D     | <i>Mycoplasma fermentans</i>                              | PG18                     | Y           | Y                |
| 23114D     | <i>Mycoplasma hominis</i>                                 | PG21                     | Y           |                  |
| 25934D     | <i>Mycoplasma hyopneumoniae</i>                           | J                        | Y           | Y                |
| 17981D     | <i>Mycoplasma hyorhinis</i>                               | BTS-7                    | Y           |                  |
| 23714D     | <i>Mycoplasma orale</i>                                   | CH 19299                 | Y           |                  |
| 25960D     | <i>Mycoplasma pirum</i>                                   | Guidice HRC/70-159       | Y           |                  |
| 15531D     | <i>Mycoplasma pneumoniae</i>                              | FH strain of Eaton Agent | Y           |                  |
| 29342D     | <i>Mycoplasma pneumoniae</i>                              | M129                     |             | Y                |
| 23064D     | <i>Mycoplasma salivarium</i>                              | PG20                     | Y           |                  |
| 700099D-5  | <i>Nakamurella multipartita</i>                           | Y-104                    | Y           | Y                |
| 35678D-5   | <i>Natronomonas pharaonis</i>                             | Gabara                   | Y           | Y                |
| 14221D     | <i>Neisseria flava</i>                                    |                          |             |                  |
| 53420D-5   | <i>Neisseria gonorrhoeae</i>                              | [ATCC 27629]             |             |                  |
| 53424D     | <i>Neisseria gonorrhoeae</i>                              | [ATCC 27630]             |             |                  |
| 700825DQ   | <i>Neisseria gonorrhoeae</i>                              | FA1090                   |             | Y                |
| 700532D-5  | <i>Neisseria meningitidis</i>                             | FAM18                    |             | Y                |
| BAA-335D-5 | <i>Neisseria meningitidis</i>                             | MC58                     |             | Y                |
| 53417D-5   | <i>Neisseria meningitidis</i> Serogroup A                 | M1027                    |             |                  |
| 53415D-5   | <i>Neisseria meningitidis</i> Serogroup B                 | [ATCC 13090]             |             |                  |
| 53414D-5   | <i>Neisseria meningitidis</i> Serogroup C                 | [ATCC 13109]             |             |                  |
| 14799D-5   | <i>Neisseria perflava</i>                                 | 28                       |             |                  |
| BAA-499D-5 | <i>Nocardioides</i> sp.                                   | JS614                    |             | Y                |
| 27893D-5   | <i>Nostoc</i> sp.   | PCC 7120                 |             | Y                |
| 29133D-5   | <i>Nostoc</i> sp.   | PCC 73102                |             | Y                |
| 700278D-5  | <i>Novosphingobium aromaticivorans</i>                    | SMCC F199                | Y           | Y                |
| 49188D-5   | <i>Ochrobactrum anthropi</i>                              | CL 350/82                | Y           | Y                |
| BAA-331D-5 | <i>Oenococcus oeni</i>                                    | PSU-1                    |             | Y                |
| 33243D     | <i>Pantoea agglomerans</i>                                | 4834                     | Y           |                  |

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| ATCC® No.*  | Source Organism                                     | Strain       | Type Strain | Sequenced Genome |
|-------------|---|--------------|-------------|------------------|
| 19321D-5    | <i>Pantoea ananatis</i>                             | XU 102       | Y           |                  |
| 31623D-5    | <i>Pantoea citrea</i>                               | SHS 2003     | Y           |                  |
| 8503D-5     | <i>Parabacteroides distasonis</i>                   | [NCTC 11152] | Y           | Y                |
| BAA-672D    | <i>Pectobacterium atrosepticum</i>                  | SCRI 1043    |             | Y                |
| 25745D-5    | <i>Pediococcus pentosaceus</i>                      | 183-1w       |             | Y                |
| 13125D-5    | <i>Pedobacter heparinus</i>                         | HIM 762-3    | Y           | Y                |
| 49031D-5    | <i>Peptostreptococcus anaerobius</i>                | MSHD         |             |                  |
| BAA-1253D-5 | <i>Photobacterium profundum</i>                     | SS9          |             | Y                |
| 43296D-5    | <i>Planctomyces limnophilus</i>                     | 290          | Y           | Y                |
| 51903D      | <i>Plesiomonas shigelloides</i>                     | GNI 14       |             |                  |
| BAA-500D-5  | <i>Polaromonas</i> sp.                              | JS666        |             | Y                |
| 35406D-5    | <i>Porphyromonas endodontalis</i>                   | HG 370       | Y           | Y                |
| 33277D-5    | <i>Porphyromonas gingivalis</i>                     | 2561         | Y           | Y                |
| BAA-308D-5  | <i>Porphyromonas gingivalis</i>                     | W83          |             | Y                |
| 25611D-5    | <i>Prevotella intermedia</i>                        | B422         | Y           |                  |
| 25845D-5    | <i>Prevotella melaninogenica</i>                    | B282         | Y           | Y                |
| 25746D-5    | <i>Propionibacterium granulosum</i>                 | D-34         |             |                  |
| 12453D      | <i>Proteus mirabilis</i>                            | D1           |             |                  |
| 9920D       | <i>Proteus vulgaris</i>                             |              |             |                  |
| 33672D      | <i>Providencia stuartii</i>                         | 495          |             |                  |
| BAA-1087D-5 | <i>Pseudoalteromonas atlantica</i>                  | T6c          |             | Y                |
| 15442D-5    | <i>Pseudomonas aeruginosa</i>                       | PRD-10       |             |                  |
| 27853D-5    | <i>Pseudomonas aeruginosa</i>                       | Boston 41501 |             |                  |
| 47085D-5    | <i>Pseudomonas aeruginosa</i>                       | PA01-LAC     |             |                  |
| BAA-477D-5  | <i>Pseudomonas fluorescens</i>                      | Pf-5         |             | Y                |
| 47054D-5    | <i>Pseudomonas putida</i>                           | KT2440       |             | Y                |
| 700007D-5   | <i>Pseudomonas putida</i>                           | F1           |             | Y                |
| BAA-978D    | <i>Pseudomonas syringae</i> pv. <i>phaseolicola</i> | 1448A        |             | Y                |
| BAA-871D-5  | <i>Pseudomonas syringae</i> pv. <i>tomato</i>       | DC3000       |             | Y                |
| 43587D-2    | <i>Pyrococcus furiosus</i>                          | Vc1          | Y           | Y                |
| 700860D-5   | <i>Pyrococcus horikoshii</i>                        | OT3          | Y           | Y                |
| 11696D-5    | <i>Ralstonia solanacearum</i>                       | CH34         | Y           |                  |
| BAA-1114D-5 | <i>Ralstonia solanacearum</i>                       | GMI1000      |             | Y                |
| 51251D-5    | <i>Rhizobium etli</i>                               | CFN42        | Y           | Y                |
| 33970D-5    | <i>Rhizobium radiobacter</i>                        | C58          |             | Y                |
| BAA-309D-5  | <i>Rhodobacter capsulatus</i>                       | SB1003       |             |                  |
| 17023D-5    | <i>Rhodobacter sphaeroides</i>                      | ATH 2.4.1    | Y           |                  |

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ATCC offers distilled, deionized, sterile-filtered Molecular Grade Water (ATCC® No. 60-2450) appropriate for all molecular biology procedures, including PCR. It is ultra pure and DNase, RNase, and protease-free.

Add at least 100  $\mu$ L of liquid to resuspend dried DNA as it is difficult to obtain a homogenous solution of DNA in concentrations greater than 200 ng/ $\mu$ L. Mix the contents well, then place the vial at 37°C for 1 hour or at 4°C overnight to allow the DNA to go into suspension. When aliquoting samples, we recommend that you remove no less than 3  $\mu$ L of material at a time.

If you have received a frozen item, thaw the ampoule in a 37°C incubator or water bath and centrifuge briefly prior to opening. Mix the contents thoroughly after removing the cap. Again, aliquot a minimum of 3  $\mu$ L.

| ATCC® No.*  | Source Organism   | Strain                 | Type Strain | Sequenced Genome |
|-------------|---|------------------------|-------------|------------------|
| 17025D-5    | <i>Rhodobacter sphaeroides</i>  | ATH 2.4.3              |             | Y                |
| BAA-808D-5  | <i>Rhodobacter sphaeroides</i>  | 2.4.1                  |             | Y                |
| BAA-98D-5   | <i>Rhodopseudomonas palustris</i>                                     | CGA009                 |             | Y                |
| 11170D-5    | <i>Rhodospirillum rubrum</i>  | NCIB 8255              | Y           | Y                |
| 43812D-5    | <i>Rhodothermus marinus</i>   | R-10                   | Y           | Y                |
| 33942D-5    | <i>Roseobacter denitrificans</i>                                      | OCh 114                | Y           | Y                |
| 43961D-5    | <i>Saccharophagus degradans</i>                                       | Feb-40                 | Y           | Y                |
| 11635D-5    | <i>Saccharopolyspora erythraea</i>                                    | M5-12259               | Y           | Y                |
| BAA-1734D-5 | <i>Salmonella enterica</i>  | MZ1486                 |             |                  |
| BAA-1250D-5 | <i>Salmonella enterica</i> serovar Paratyphi B                        | SPB7                   |             | Y                |
| BAA-731D-5  | <i>Salmonella enterica</i> subsp. <i>arizonae</i>                     | RSK2980                | Y           | Y                |
| BAA-1579D-5 | <i>Salmonella enterica</i> subsp. <i>diarizonae</i>                   | MZ1444                 |             |                  |
| 10708D-5    | <i>Salmonella enterica</i> subsp. <i>enterica</i>                     | ETS 34                 |             |                  |
| 13311D-5    | <i>Salmonella enterica</i> subsp. <i>enterica</i>                     | NCTC 74                |             |                  |
| 700720DQ    | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Typhimurium | LT2                    | Y           | Y                |
| 49284D      | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Minnesota   | mR595                  |             |                  |
| 9150D-5     | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Paratyphi A |                        |             | Y                |
| 700931D-5   | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Typhi       | Ty2                    | Y           | Y                |
| BAA-1587D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Enteritidis | MZ1436                 |             |                  |
| BAA-1675D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Infantis    | MZ1479                 |             | Y                |
| BAA-1674D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Muenchen    | MZ1477                 |             | Y                |
| BAA-1715D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Paratyphi C | MZ1445                 |             | Y                |
| BAA-1673D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Poona       | MZ1481                 |             | Y                |
| BAA-1672D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Sendai      | MZ1468                 |             | Y                |
| BAA-1671D-5 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Typhi       | MZ1480                 |             |                  |
| BAA-1580D-5 | <i>Salmonella enterica</i> subsp. <i>houtenae</i> (IV)                | MZ1443                 |             |                  |
| BAA-1578D-5 | <i>Salmonella enterica</i> subsp. <i>indica</i> (VI)                  | MZ1447                 |             |                  |
| BAA-1583D-5 | <i>Salmonella enterica</i> subsp. <i>salamae</i> (II)                 | MZ1440                 |             |                  |
| 27137D-5    | <i>Serratia marcescens</i>  | CDC 3100-71            |             |                  |
| 700550D     | <i>Shewanella oneidensis</i>  | MR-1                   | Y           | Y                |
| BAA-453D-5  | <i>Shewanella putrefaciens</i>  | CN-32                  |             | Y                |
| 29903D-5    | <i>Shigella flexneri</i>  | 24570                  | Y           |                  |
| 700930D-5   | <i>Shigella flexneri</i>  | 2457T                  |             | Y                |
| 27556D-5    | <i>Spiroplasma citri</i>  | Morocco-R8-A2          | Y           |                  |
| 33905D-5    | <i>Spirosoma linguale</i>   | DSM 74 [1]             | Y           | Y                |
| 10832D-5    | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | Wood 46                |             |                  |
| 25923D-5    | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | Seattle 1945           |             |                  |
| 33591D-5    | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | 328                    |             |                  |
| 35556D-5    | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | SA113                  |             |                  |
| 6538D-5     | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | FDA 209                |             |                  |
| 700698D-5   | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | Mu3                    |             | Y                |
| 700699DQ    | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | Mu50                   |             | Y                |
| BAA-1556D-5 | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | FPR3757, USA 300       |             | Y                |
| BAA-1717D-5 | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | TCH1516; USA300-HOU-MR |             | Y                |
| BAA-1718D-5 | <i>Staphylococcus aureus</i> subsp. <i>aureus</i>                     | TCH959; USA300-HOU-MS  |             | Y                |
| 12228D-5    | <i>Staphylococcus epidermidis</i>                                     | FDA strain PCI 1200    |             | Y                |
| 35984D-5    | <i>Staphylococcus epidermidis</i>                                     | RP62A                  |             | Y                |
| 29970D-5    | <i>Staphylococcus haemolyticus</i>                                    | SM 131                 | Y           |                  |
| 700236D-5   | <i>Staphylococcus hominis</i> subsp. <i>novobiosepticus</i>           | R22                    | Y           |                  |

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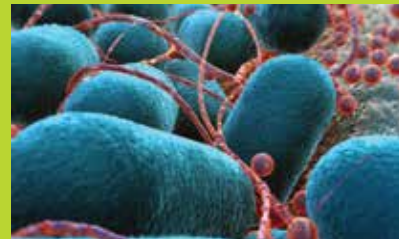
| ATCC® No.*  | Source Organism  | Strain           | Type Strain | Sequenced Genome |
|-------------|--|------------------|-------------|------------------|
| 43809D      | <i>Staphylococcus lugdunensis</i>                          | N860297          | Y           |                  |
| 15305D-5    | <i>Staphylococcus</i> subsp. <i>saprophyticus</i>          | S-41             | Y           | Y                |
| 43808D-5    | <i>Staphylococcus schleiferi</i> subsp. <i>schleiferi</i>  | N850274          | Y           |                  |
| 13637D-5    | <i>Stenotrophomonas maltophilia</i>                        | 810-2            | Y           |                  |
| 14647D-5    | <i>Streptobacillus moniliformis</i>                        | 9901             | Y           | Y                |
| BAA-1138D-5 | <i>Streptococcus agalactiae</i>                            | A909             |             | Y                |
| 35105D-5    | <i>Streptococcus gordonii</i>                              | Challis CH1      |             | Y                |
| 49456D-5    | <i>Streptococcus mitis</i>                                 | NS 51            | Y           |                  |
| 700610D-5   | <i>Streptococcus mutans</i>                                | UA159            |             | Y                |
| 33400D-5    | <i>Streptococcus pneumoniae</i>                            | NCTC 7465        | Y           |                  |
| 6308D-5     | <i>Streptococcus pneumoniae</i>                            |                  |             |                  |
| 6314D-5     | <i>Streptococcus pneumoniae</i>                            |                  |             |                  |
| 700669D-5   | <i>Streptococcus pneumoniae</i>                            | Spain 23F-1      |             | Y                |
| BAA-255D-5  | <i>Streptococcus pneumoniae</i>                            | R6               |             | Y                |
| BAA-334D-5  | <i>Streptococcus pneumoniae</i>                            | TIGR4            |             | Y                |
| 12344D-5    | <i>Streptococcus pyogenes</i>                              | Typing strain T1 | Y           |                  |
| 19615D-5    | <i>Streptococcus pyogenes</i>                              | Bruno            |             |                  |
| BAA-1063D-5 | <i>Streptococcus pyogenes</i>                              | MGAS 10270       |             | Y                |
| BAA-1315D-5 | <i>Streptococcus pyogenes</i>                              | MGAS 9429        |             | Y                |
| BAA-595D-5  | <i>Streptococcus pyogenes</i>                              | MGAS 315         |             | Y                |
| BAA-947D-5  | <i>Streptococcus pyogenes</i>                              | MGAS 5005        |             | Y                |
| BAA-1633D-5 | <i>Streptococcus pyogenes</i>                              | NZ131            |             | Y                |
| BAA-572D-5  | <i>Streptococcus pyogenes</i>                              | MGAS 8232        |             | Y                |
| 9759D-5     | <i>Streptococcus salivarius</i>                            | B2               |             |                  |
| BAA-1024D-5 | <i>Streptococcus salivarius</i>                            | DSM 13084        |             |                  |
| BAA-250D-5  | <i>Streptococcus salivarius</i> subsp. <i>thermophilus</i> | LMG 18311        |             | Y                |
| 10556D-5    | <i>Streptococcus sanguinis</i>                             | DSS-10           | Y           |                  |
| BAA-1455D-5 | <i>Streptococcus sanguinis</i>                             | SK36             |             | Y                |
| BAA-491D-5  | <i>Streptococcus thermophilus</i>                          | LMD-9            |             | Y                |
| BAA-854D-5  | <i>Streptococcus uberis</i>                                | 0140J            |             |                  |
| 31267D-5    | <i>Streptomyces avermitilis</i>                            | MA-4680          | Y           | Y                |
| 27419D-5    | <i>Streptomyces avidinii</i>                               | MA-833           | Y           |                  |
| 35852D      | <i>Streptomyces cattleya</i>                               | MA-4297          |             |                  |
| 23915D      | <i>Streptomyces griseinus</i>                              | ISP 5047         | Y           |                  |
| 69445D      | <i>Streptomyces lividans</i>                               | FD 29419         |             |                  |
| BAA-471D-5  | <i>Streptomyces violaceoruber</i>                          | M145             |             | Y                |
| 12428D-5    | <i>Streptosporangium roseum</i>                            | 27b              | Y           | Y                |
| BAA-1142D-5 | <i>Sulfitobacter</i> sp.                                   | EE-36            |             | Y                |
| 33909D-5    | <i>Sulfolobus acidocaldarius</i>                           | 98-3             | Y           | Y                |
| 35092D-5    | <i>Sulfolobus solfataricus</i>                             | P2               |             | Y                |
| 33889D-5    | <i>Sulfurimonas denitrificans</i>                          | DSM 1251         | Y           | Y                |
| 51133D-5    | <i>Sulfurospirillum deleyianum</i>                         | Spirillum 5175   | Y           | Y                |
| 33912D-5    | <i>Synechococcus elongatus</i>                             | PCC 7942         |             | Y                |
| 27264D-5    | <i>Synechococcus</i> sp.                                   | PCC 7002         |             | Y                |
| 27184D-5    | <i>Synechocystis</i> sp.                                   | N-1              |             | Y                |
| 43037D-5    | <i>Tannerella forsythia</i>                                | FDC 338          | Y           |                  |
| 33223D-5    | <i>Thermoanaerobacter pseudethanolicus</i>                 | 39E              |             | Y                |
| BAA-938D-5  | <i>Thermoanaerobacter</i> sp.                              | X514             |             | Y                |
| BAA-798D-5  | <i>Thermobaculum terrenum</i>                              | YNP1             | Y           | Y                |

\*ATCC catalog numbers with DQ are quantitative products

| ATCC® No.*  | Source Organism   | Strain           | Type Strain | Sequenced Genome |
|-------------|---|------------------|-------------|------------------|
| BAA-629D-5  | <i>Thermobifida fusca</i>                                   | YX               |             | Y                |
| 700654D-5   | <i>Thermococcus gorgonarius</i>                             | DSM 10395 [W-12] | Y           |                  |
| 700653D     | <i>Thermococcus pacificus</i>                               | P-4              | Y           |                  |
| 700529D-5   | <i>Thermococcus zilligii</i>                                | DSM 2770         | Y           |                  |
| 19995D-5    | <i>Thermomonospora curvata</i>                              | DSM 43183        | Y           | Y                |
| 25905D-5    | <i>Thermoplasma acidophilum</i>                             | 122-1B2          | Y           | Y                |
| 51530D-5    | <i>Thermoplasma volcanium</i>                               | GSS1             | Y           | Y                |
| 43589D-2    | <i>Thermotoga maritima</i>                                  | MSB8             | Y           | Y                |
| 49049D      | <i>Thermotoga neapolitana</i>                               | NS-E             | Y           | Y                |
| BAA-488D-5  | <i>Thermotoga pertrophilia</i>                              | RKU-1            | Y           | Y                |
| 700961D     | <i>Thermus antranikianii</i>                                | HN3-7            | Y           |                  |
| 700962D-5   | <i>Thermus igniterrae</i>                                   | RF-4             | Y           |                  |
| 27634D-5    | <i>Thermus thermophilus</i>                                 | HB-8             | Y           | Y                |
| 33923D      | <i>Thermus thermophilus</i>                                 | AT-62            |             |                  |
| BAA-163D-5  | <i>Thermus thermophilus</i>                                 | HB27             |             | Y                |
| 25259D-5    | <i>Thiobacillus denitrificans</i>                           | T1               |             | Y                |
| 35405D-5    | <i>Treponema denticola</i>                                  | a                | Y           | Y                |
| 8368D-5     | <i>Tsukamurella paurometabola</i>                           | [DSM 20162]      | Y           | Y                |
| 10790D-5    | <i>Veillonella parvula</i>                                  | Te 3             | Y           | Y                |
| BAA-1489D-5 | <i>Verminephrobacter eiseniae</i>                           | EF01-2           | Y           | Y                |
| 39315D-5    | <i>Vibrio cholerae</i> biovar eltor                         | N16961           |             | Y                |
| 51394D-5    | <i>Vibrio cholerae</i>                                      | MO45             |             |                  |
| BAA-1116D-5 | <i>Vibrio harveyi</i>                                       | BB120            | Y           | Y                |
| 29543D-5    | <i>Wolinella succinogenes</i>                               | FDC 602W         | Y           | Y                |
| BAA-1158D-5 | <i>Xanthobacter autotrophicus</i>                           | Py2              |             | Y                |
| 33913D-5    | <i>Xanthomonas campestris</i> pv. <i>campestris</i>         | NCPPB 528        | Y           | Y                |
| 700964D-5   | <i>Xylella fastidiosa</i>                                   | Temecula         |             | Y                |
| 27739D-5    | <i>Yersinia enterocolitica</i> subsp. <i>enterocolitica</i> |                  |             |                  |
| 23715D-5    | <i>Yersinia enterocolitica</i> subsp. <i>enterocolitica</i> | Billups-1803-68  |             |                  |
| 27729D-5    | <i>Yersinia enterocolitica</i> subsp. <i>enterocolitica</i> | WA               |             |                  |
| 9610D       | <i>Yersinia enterocolitica</i> subsp. <i>enterocolitica</i> | 33114            | Y           |                  |
| BAA-1504D-5 | <i>Yersinia pestis</i>                                      | Kim              |             |                  |
| BAA-1505D-5 | <i>Yersinia pestis</i>                                      | TS               |             |                  |
| BAA-1506D-5 | <i>Yersinia pestis</i>                                      | A12              |             |                  |
| 27802D-5    | <i>Yersinia pseudotuberculosis</i>                          | NCTC 9509 [105]  |             |                  |
| 29910D-5    | <i>Yersinia pseudotuberculosis</i>                          | CDC P62          |             |                  |
| 6904D-5     | <i>Yersinia pseudotuberculosis</i>                          | NCTC 2476        |             |                  |

\*ATCC catalog numbers with DQ are quantitative products

The *Enterococcus faecalis* Quantitative DNA Standard (ATCC® 29212Q-FZ™) is recommended for use with EPA Method 1611: Enterococci in Water by TaqMan® Quantitative Polymerase Chain Reaction (qPCR) Assay.



# GENOMIC DNA FROM FUNGI & YEAST

There are an estimated 1.5 million species in the fungal kingdom, including various yeasts, rusts, smuts, mildews, molds, mushrooms, and toadstools. These eukaryotic organisms are abundant worldwide and encompass a large diversity of taxa that vary in morphology, reproduction, and ecology. Here, we provide a full listing of available nucleic acid preparations extracted from fungal and yeast strains in the ATCC® Mycology Collection.

| ATCC® No.   | Source Organism                 | Strain           | Type Strain | Sequenced Genome |
|-------------|---------------------------------|------------------|-------------|------------------|
| 90507D-2    | <i>Acremonium alcalophilum</i>  | JCM 7366         | Y           | Y                |
| MYA-4450D-2 | <i>Ascosphaera apis</i>         | ARSEF 7405 [A10] |             |                  |
| 16404D-2    | <i>Aspergillus brasiliensis</i> | WLRI 034(120)    |             |                  |
| 9642D-2     | <i>Aspergillus brasiliensis</i> | SN 26            |             |                  |
| 1007D-2     | <i>Aspergillus clavatus</i>     | QM 1276          | Y           | Y                |
| 204304D-2   | <i>Aspergillus flavus</i>       | MCV-C#1          |             |                  |
| 9643D-2     | <i>Aspergillus flavus</i>       | SN 3             |             |                  |
| 1022D-2     | <i>Aspergillus fumigatus</i>    | NRRL 163         | Y           |                  |
| MYA-4609D-2 | <i>Aspergillus fumigatus</i>    | CBS 101355       |             | Y                |
| 38163D-2    | <i>Aspergillus nidulans</i>     | G00              |             | Y                |
| 1015D-2     | <i>Aspergillus niger</i>        | 3528.7           |             | Y                |
| 6275D-2     | <i>Aspergillus niger</i>        | 4247             |             |                  |
| 42149D-2    | <i>Aspergillus oryzae</i>       | RIB 40           |             | Y                |
| 20542D-2    | <i>Aspergillus terreus</i>      | MF4845           |             | Y                |



Image of *Aspergillus fumigatus*. Photo courtesy of D. Gregory and D. Marshall.

For nucleic acid preparations isolated from *Aspergillus* spp. and other filamentous fungi, adding freshly prepared milk powder solution to a PCR reaction (i.e., 1 µL of 50 mg/mL solution in 50 µL of PCR reaction) may enhance the PCR efficiency. The 'hot start' PCR method is also recommended.

| ATCC® No.   | Source Organism               | Strain       | Type Strain | Sequenced Genome |
|-------------|-------------------------------|--------------|-------------|------------------|
| 11730D-2    | <i>Aspergillus versicolor</i> | QM 432       |             |                  |
| 10231DQ     | <i>Candida albicans</i>       | 3147         |             |                  |
| 14053D      | <i>Candida albicans</i>       | NIH 3172     |             |                  |
| MYA-2876D-5 | <i>Candida albicans</i>       | SC5314       |             | Y                |
| 11006D-5    | <i>Candida albicans</i>       |              | Y           |                  |
| 66027D-5    | <i>Candida albicans</i>       | AmMS 225     |             |                  |
| 90028D-5    | <i>Candida albicans</i>       | NCCLS 11     |             |                  |
| 15545D-5    | <i>Candida glabrata</i>       | NRRLYB-4025  |             |                  |
| 2001D-5     | <i>Candida glabrata</i>       | CBS 138      | Y           | Y                |
| 36909D      | <i>Candida glabrata</i>       | NCYC 388     |             |                  |
| MYA-2950D-5 | <i>Candida glabrata</i>       | VITEK 303542 |             |                  |
| 6260D-5     | <i>Candida guilliermondii</i> |              | Y           | Y                |
| 66028D      | <i>Candida kefyr</i>          | AmMS 226     |             |                  |
| 42720D-5    | <i>Candida lusitanae</i>      | 45090        |             | Y                |
| 96144D      | <i>Candida metapsilosis</i>   | MCO448       | Y           |                  |
| 22019D-5    | <i>Candida parapsilosis</i>   | CBS 604      | Y           |                  |
| 750D-5      | <i>Candida tropicalis</i>     | 1909         | Y           | Y                |
| 66029D-5    | <i>Candida tropicalis</i>     | AmMS 227     |             |                  |
| MYA-3404D-5 | <i>Candida tropicalis</i>     | T1           |             | Y                |
| 6205D-2     | <i>Chaetomium globosum</i>    | 1042.4       |             | Y                |
| MYA-4071D-2 | <i>Cryptococcus gattii</i>    | WM 276       |             | Y                |

| ATCC® No.   | Source Organism                                   | Strain     | Type Strain | Sequenced Genome |
|-------------|---|------------|-------------|------------------|
| MYA-4093D-2 | <i>Cryptococcus gattii</i>                        | A1M R265   |             | Y                |
| 18803D-5    | <i>Cryptococcus laurentii</i>                     | CBS 139    | Y           |                  |
| 20918D-5    | <i>Cryptococcus magnus</i>                        | IFF-8275c  |             |                  |
| 66031D-5    | <i>Cryptococcus neoformans</i>                    | AmMS 229   |             |                  |
| MYA-565D-5  | <i>Cryptococcus neoformans</i>                    | JEC 21     |             | Y                |
| 208821D-2   | <i>Cryptococcus neoformans</i> var. <i>grubii</i> | H99JP      | Y           | Y                |
| 36239D-5    | <i>Debaryomyces hansenii</i>                      | CBS 767    | Y           | Y                |
| 10895D-2    | <i>Eremothecium gossypii</i>                      | NRRLY-1056 |             | Y                |
| 34100D-2    | <i>Exophiala dermatitidis</i>                     | 8656       |             | Y                |
| 34873D-2    | <i>Filobasidiella neoformans</i>                  | NIH B-3501 |             | Y                |
| 36031D-2    | <i>Fusarium solani</i>                            | FIV/74     |             |                  |
| MYA-4855D   | <i>Geomyces destructans</i>                       | 20631-21   | Y           | Y                |
| 28576D-2    | <i>Geotrichum capitatum</i>                       | CBS 5582   |             |                  |

*Cryptococcus* is a yeast-like fungus known to cause respiratory complications, meningitis, and death in both healthy and immunologically compromised individuals. In recent years, the development of rapid, molecular-based assays have significantly improved the diagnosis of cryptococcosis. To further aid in the evaluation and application of these tools, ATCC offers standardized genomic DNA preparations from clinically relevant *Cryptococcus* species, including those isolated from type strains and genome sequencing strains.

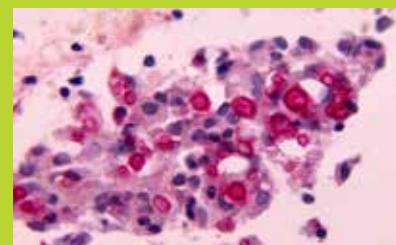


Image of *Cryptococcus neoformans* lung infection. Photo courtesy of Dr. L. Haley and the CDC.

| ATCC® No.              | Source Organism                             | Strain      | Type Strain | Sequenced Genome |
|------------------------|---|-------------|-------------|------------------|
| 6258D-5                | <i>Issatchenkia orientalis</i>              |             | Y           |                  |
| 8585D-5                | <i>Kluyveromyces lactis</i>                 | 61          |             | Y                |
| 56472D-5               | <i>Kluyveromyces thermotolerans</i>         | NRRLY-8284  | Y           | Y                |
| 56500D-5               | <i>Kluyveromyces waltii</i>                 | UCD 72-13   | Y           | Y                |
| 28485D-5               | <i>Komagataella pastoris</i>                | CBS 704     | Y           | Y                |
| 58438D-5               | <i>Lachancea kluyveri</i>                   | CBS 3082    | Y           | Y                |
| 11503D-5               | <i>Lodderomyces elongisporus</i>            | 78          | Y           | Y                |
| MYA-4612D-5            | <i>Malassezia globosa</i>                   | CBS 7966    | Y           | Y                |
| 14522D-5               | <i>Malassezia pachydermatis</i>             | 238 Shesis  | Y           |                  |
| MYA-4611D-5            | <i>Malassezia restricta</i>                 | CBS 7877    | Y           | Y                |
| 76901D-5               | <i>Naumovozyma castellii</i>                | CBS 4309    | Y           | Y                |
| 34438D-5               | <i>Ogataea polymorpha</i>                   | NRRLY-5445  | Y           | Y                |
| MYA-826D-2             | <i>Paracoccidioides brasiliensis</i>        | Pb01        |             | Y                |
| 28089D-2               | <i>Penicillium chrysogenum</i>              | WIS 54-1255 |             | Y                |
| 10106D-2               | <i>Penicillium chrysogenum</i>              | 26          | Y           |                  |
| 11797D-2               | <i>Penicillium funiculosum</i>              | BPI 66      |             |                  |
| 18224D-2               | <i>Penicillium marneffeii</i>               | QM 7333     | Y           | Y                |
| MYA-4764D-2            | <i>Phanerochaete chrysosporium</i>          | RP-78       |             | Y                |
| MYA-2949D-2            | <i>Phytophthora ramorum</i>                 | Pr-102      | Y           | Y                |
| MYA-4447D-5            | <i>Pichia farinosa</i> var. <i>farinosa</i> | CBS 7064    | Y           | Y                |
| 76518D-5               | <i>Saccharomyces bayanus</i>                | CBS 7001    | Y           | Y                |
| 201388D-5 <sup>†</sup> | <i>Saccharomyces cerevisiae</i>             | BY4741      |             |                  |
| 201389D-5 <sup>†</sup> | <i>Saccharomyces cerevisiae</i>             | BY4742      |             |                  |
| 201390D-5 <sup>†</sup> | <i>Saccharomyces cerevisiae</i>             | BY4743      |             |                  |
| 9080D-5 <sup>†</sup>   | <i>Saccharomyces cerevisiae</i>             | 4228        |             |                  |
| 9763D-5 <sup>†</sup>   | <i>Saccharomyces cerevisiae</i>             | NRRLY-567   |             |                  |

| ATCC® No.   | Source Organism                   | Strain       | Type Strain | Sequenced Genome |
|-------------|-----------------------------------|--------------|-------------|------------------|
| 204508D-5†  | <i>Saccharomyces cerevisiae</i>   | S288C        |             | Y                |
| 2601D-5     | <i>Saccharomyces kudriavzevii</i> | 2601-U       |             |                  |
| MYA-4449D-5 | <i>Saccharomyces kudriavzevii</i> | IFO 1802     | Y           | Y                |
| MYA-4448D-5 | <i>Saccharomyces mikatae</i>      | CBS 8839     | Y           | Y                |
| 58439D-5    | <i>Saccharomyces servazzii</i>    | CBS 4311     | Y           | Y                |
| 56851D-2    | <i>Saprolegnia diclina</i>        | FBA 810      |             |                  |
| 58785D-2    | <i>Scheffersomyces stipitis</i>   | CBS 6054     |             | Y                |
| 24843D-5    | <i>Schizosaccharomyces pombe</i>  | 972 h-       |             | Y                |
| 26189D-5    | <i>Schizosaccharomyces pombe</i>  | 972H-        |             | Y                |
| 18683D-2    | <i>Sclerotinia sclerotiorum</i>   | 1980         |             | Y                |
| 34921D-2    | <i>Tolypocladium inflatum</i>     | NRRL 8044    |             | Y                |
| 13631D-2    | <i>Trichoderma reesei</i>         | TVB117       | Y           | Y                |
| 26921D-2    | <i>Trichoderma reesei</i>         | 3019         |             | Y                |
| 9645D-2     | <i>Trichoderma virens</i>         | T-1          |             |                  |
| 204094D-5   | <i>Trichosporon mucoides</i>      | Vitek 303483 |             |                  |
| 9533D-2     | <i>Tricophyton mentagrophytes</i> | 640          |             |                  |
| 22028D-5    | <i>Vanderwaltozyma polyspora</i>  | CBS 2163     | Y           | Y                |
| 2623D-5     | <i>Zygosaccharomyces rouxii</i>   | NRRLY-229    | Y           | Y                |

†Stabilized by Biomātrica the Biostability Company

# GENOMIC DNA FROM PROTISTS

Protists are a diverse group of eukaryotic organisms that includes both protozoa and algae. These organisms are of clinical relevance as many protozoan species are human pathogens, causing diseases such as leishmaniasis, giardiasis, and toxoplasmosis. Additionally, protists are of ecological importance as they are the predominant primary producers in most aquatic and soil environments. Here, we provide a full listing of available nucleic preparations from the ATCC® Protistology Collection, including those isolated from protists belonging to the Amoebozoa, Chromalveolata, and Excavata supergroups.

| ATCC® No.* | Source Organism                     | Strain                  | Type Strain | Sequenced Genome |
|------------|-------------------------------------|-------------------------|-------------|------------------|
| 30010D     | <i>Acanthamoeba castellanii</i>     | Neff                    |             | Y                |
| 30221D     | <i>Babesia microti</i>              | Gray                    |             |                  |
| 50177D     | <i>Blastocystis hominis</i>         | Nand II                 |             |                  |
| 50608D     | <i>Blastocystis hominis</i>         | BT1                     |             |                  |
| PRA-67DQ   | <i>Cryptosporidium parvum</i>       | Iowa strain             |             | Y                |
| 30459DQ    | <i>Entamoeba histolytica</i>        | HM-1:IMSS [ABRM]        |             | Y                |
| MP-14      | Enteric Protozoa DNA Panel          |                         |             |                  |
| 30888D     | <i>Giardia intestinalis</i>         | Portland-1              |             |                  |
| 30957D     | <i>Giardia intestinalis</i>         | WB                      |             |                  |
| 50803D     | <i>Giardia intestinalis</i>         | WB Clone C6             |             | Y                |
| 30030D     | <i>Leishmania donovani</i>          | Khartoum                |             |                  |
| MP-13      | <i>Leishmania</i> Genomic DNA Panel |                         |             |                  |
| 50134D     | <i>Leishmania infantum</i>          | MHOM/TN/80/IPT-1        |             |                  |
| 30012D     | <i>Leishmania major</i>             |                         |             |                  |
| PRA-309D   | <i>Leishmania major</i>             | Seidman                 |             |                  |
| 50129D     | <i>Leishmania tropica</i>           | MHOM/SU/74/K27          |             |                  |
| 30174D     | <i>Naegleria fowleri</i>            | HB1                     |             |                  |
| 50843D     | <i>Neospora caninum</i>             | Nc-1                    |             |                  |
| 50984D     | <i>Perkinsus atlanticus</i>         | ALG1                    |             |                  |
| 50439D     | <i>Perkinsus marinus</i>            | CRTW-3HE (MD-1)         |             |                  |
| PRA-405D   | <i>Plasmodium falciparum</i>        | 3D7                     |             |                  |
| 16529D     | <i>Prototheca wickerhamii</i>       | NRRLYB-4330 [UTEX 1553] | Y           |                  |
| 30007D     | <i>Tetrahymena thermophila</i>      | WH-6                    | Y           |                  |
| 50174D     | <i>Toxoplasma gondii</i>            | RH                      | Y           | Y                |
| 30001D     | <i>Trichomonas vaginalis</i>        | C-1:NIH                 |             |                  |
| PRA-98D    | <i>Trichomonas vaginalis</i>        | G8                      |             | Y                |
| 30266D     | <i>Trypanosoma cruzi</i>            | Tulahuen                |             |                  |
| 50823D     | <i>Trypanosoma cruzi</i>            | SYLVIO-X10              |             | Y                |
| 30022D     | <i>Trypanosoma lewisi</i>           | Lincicome               |             |                  |

\*ATCC catalog numbers with DQ are quantitative products

Standardized molecular reagents are critical in the development of molecular assays used to diagnose parasitic disease. Genomic DNA preparations from parasitic protozoa provide researchers with rapid access to protozoan nucleic acids without the hassle of *in vitro* expansions.

Protozoan DNA preparations are available as individual reagents, or within the *Leishmania* DNA Panel (ATCC® MP-13™) and the Enteric Protozoa DNA Panel (ATCC® MP-14™). Each panel is offered at bulk discount pricing, allowing you to take advantage of added cost savings when compared to individual items



Image of *Giardia lamblia*. Photo courtesy of Dr. S. Erlandsen and the CDC.



# GENOMIC DNA & RNA FROM VIRUSES

Viruses are obligate intracellular organisms that require living cells in order to multiply. Unlike other microorganisms that have double-stranded DNA as genomic material, viral genomes can be composed of double-stranded DNA, single-stranded DNA, double-stranded RNA, or single-stranded RNA. Single-stranded RNA viruses can be further described as positive-sense, negative-sense, or ambisense. Here, we provide a full listing of available nucleic acid preparations from the ATCC® Virology Collection.

## DNA from Viruses and Chlamydiae

| ATCC® No.* | Source Organism                  | Strain        | Significance       |
|------------|----------------------------------|---------------|--------------------|
| VR-348BD   | <i>Chlamydia trachomatis</i>     | BOUR          | Serovar E          |
| VR-878D    | <i>Chlamydia trachomatis</i>     | UW-57/Cx      | Serovar G          |
| VR-885D    | <i>Chlamydia trachomatis</i>     | UW-3/Cx       | Serovar D          |
| VR-886D    | <i>Chlamydia trachomatis</i>     | UW-36/Cx      | Serovar J          |
| VR-879D    | <i>Chlamydia trachomatis</i>     | UW-43/Cx      | Serovar H          |
| VR-901BD   | <i>Chlamydia trachomatis</i>     |               | LGV Serovar I      |
| VR-902BD   | <i>Chlamydia trachomatis</i>     |               | LGV Serovar II     |
| VR-903D    | <i>Chlamydia trachomatis</i>     |               | LGV Serovar III    |
| 53592D     | <i>Chlamydomphila pneumoniae</i> | AR-39         |                    |
| VR-1360D   | <i>Chlamydomphila pneumoniae</i> | CM-1          |                    |
| VR-1D      | Human adenovirus 1               | Adenoid 71    | Human adenovirus C |
| VR-846D    | Human adenovirus 2               | Adenoid 6     | Human adenovirus C |
| VR-847D    | Human adenovirus 3               | GB            | Human adenovirus B |
| VR-1572D   | Human adenovirus 4               | RI-67         | Human adenovirus E |
| VR-5D      | Human adenovirus 5               | Adenoid 75    | Human adenovirus C |
| VR-6D      | Human adenovirus 6               | Tonsil 99     | Human adenovirus C |
| VR-7D      | Human adenovirus 7               | Gomen         | Human adenovirus B |
| VR-1815D   | Human adenovirus 8               | Trim          |                    |
| VR-12D     | Human adenovirus 11              | Slobitski     | Human adenovirus B |
| VR-863D    | Human adenovirus 12              | Huie          | Human adenovirus A |
| VR-15D     | Human adenovirus 14              | de Wit        | Human adenovirus B |
| VR-1109D   | Human adenovirus 31              | 1315          | Human adenovirus A |
| VR-718D    | Human adenovirus 35              | Holden        | Human adenovirus B |
| VR-929D    | Human adenovirus 37              | GW (76-19026) | Human adenovirus D |
| VR-931D    | Human adenovirus 40              | Dugan         | Human adenovirus F |
| VR-930D    | Human adenovirus 41              | Tak           | Human adenovirus F |
| VR-1603D   | Human adenovirus 51              | Bom           | Human adenovirus D |
| VR-539DQ   | Human herpesvirus 1              | MacIntyre     | HSV-1              |
| VR-1493D   | Human herpesvirus 1              | KOS           |                    |
| VR-260D    | Human herpesvirus 1              | HF            |                    |
| VR-540DQ   | Human herpesvirus 2              | MS            | HSV-2              |
| VR-734D    | Human herpesvirus 2              | G             |                    |
| VR-1367DQ  | Human herpesvirus 3 VZV          | Ellen         |                    |
| VR-538DG   | Human herpesvirus 5 HCMV         | AD-169        |                    |

\*ATCC catalog numbers with DQ are quantitative products



When working with viral nucleic acid preparations, avoid multiple freeze-thaw cycles. This can be achieved by aliquotting samples into smaller 1-2x use volumes.

## DNA from Viruses and Chlamydiae

| ATCC® No.* | Source Organism     | Strain | Significance           |
|------------|---------------------|--------|------------------------|
| VR-977D    | Human herpesvirus 5 | Towne  |                        |
| VR-1592D   | Koi herpesvirus     | F347   | Cyprinid herpesvirus 3 |
| VR-1354D   | Vaccinia virus      | WR     |                        |
| VR-1508D   | Vaccinia virus      | MVA    |                        |

\*ATCC catalog numbers with DQ are quantitative products

## RNA from Viruses

| ATCC® No. | Source Organism                   | Strain                | Significance            |
|-----------|-----------------------------------|-----------------------|-------------------------|
| VR-1558D  | Betacoronavirus 1                 | OC43                  | Human coronavirus OC43  |
| VR-740D   | Human coronavirus 229E            | 229E                  |                         |
| VR-1734D  | Human echovirus 4                 | Pesasek               | Human enterovirus B     |
| VR-1823D  | Human enterovirus D68             | US/MO/14-18947        | 2014 outbreak strain    |
| VR-1825D  | Human enterovirus D68             | US/KY/14-18953        | 2014 outbreak strain    |
| VR-1775DQ | Human enterovirus 71              | BrCr                  | Clinical isolate        |
| VR-1377D  | Human parainfluenza virus 4B      | CH 19503              |                         |
| VR-92D    | Human parainfluenza virus 2       | Greer                 |                         |
| VR-93D    | Human parainfluenza virus 3       | C 243                 |                         |
| VR-94D    | Human parainfluenza virus 2       | C35                   |                         |
| VR-1540D  | Human respiratory syncytial virus | A2                    | subsp. A                |
| VR-1580D  | Human respiratory syncytial virus | 18537                 | subsp. B                |
| VR-26D    | Human respiratory syncytial virus | Long                  | subsp. A                |
| VR-955D   | Human respiratory syncytial virus | 9320                  | subsp. B                |
| VR-1803D  | Human respiratory syncytial virus | ATCC-2012-11          | Recent clinical isolate |
| VR-1663D  | Human rhinovirus 17               | 33342                 |                         |
| VR-2018DQ | Human rotavirus                   | WA                    | Clinical isolate        |
| VR-1738D  | Influenza A virus                 | A/Virginia/ATCC3/2009 | H1N1                    |
| VR-1682D  | Influenza A virus                 | A/Swine/1976/31       | H1N1                    |
| VR-1683D  | Influenza A virus                 | A/Swine/Iowa/15/30    | H1N1                    |
| VR-1736D  | Influenza A virus                 | A/Virginia/ATCC1/2009 | H1N1                    |
| VR-1737D  | Influenza A virus                 | A/Virginia/ATCC2/2009 | H1N1                    |
| VR-1679D  | Influenza A virus                 | A/Hong Kong/8/68      | H3N2                    |
| VR-1680D  | Influenza A virus                 | A/Aichi/2/68          | H3N2                    |
| VR-1735D  | Influenza B virus                 | B/Taiwan/2/62         |                         |
| VR-1535D  | Influenza B virus                 | B/Lee/40              |                         |
| VR-24D    | Measles virus                     | Edmonston             |                         |
| VR-106D   | Mumps virus                       | Enders                |                         |
| VR-315D   | Rubella virus                     | M33                   |                         |

Prior to working with viral RNA preparations, you should establish an RNase-free environment. This can be achieved through a combination of techniques, including the use of:

- Sterile, disposable plastic-ware
- Sterile, filtered pipette tips
- RNase-free, distilled water
- Sterile, disposable gloves
- Treatment of laboratory surfaces with an appropriate RNase remover



## Plasmid DNA from Molecularly Cloned Viruses

| ATCC® No. | Source Organism                | Strain    | Significance |
|-----------|--------------------------------|-----------|--------------|
| 45020D    | Hepatitis B virus              | AM6       |              |
| 45137D    | Hepatitis delta virus          | pSVL (DS) |              |
| 45113D    | Human papilloma virus          | phPV-16   |              |
| 45150D    | Human papilloma virus          | Type 6B   |              |
| 45151D    | Human papilloma virus          | Type 11   |              |
| 45152D    | Human papilloma virus          | Type 18   |              |
| 45134D    | Human T cell leukemia virus II | HTLV-II   |              |
| 45019D    | Simian Virus 40                | pBRSV     |              |

# SYNTHETIC NUCLEIC ACIDS

Synthetic nucleic acids are designed and developed by the experts in microbial genomics to include key target regions from difficult-to-culture or unculturable microorganisms. Each preparation is supported by stringent quality control analyses to ensure product identity, stability, quantity, and functionality. Here, we provide a full listing of synthetic nucleic acid preparations available at ATCC. These molecular standards are appropriate for use as control material in the development and validation of molecular-based applications.

| ATCC® No.† | Synthetic Genome  | Genetic Target   |
|------------|---|--|
| VR-3238SD  | Astrovirus  | Fragments from the ORF1a, ORF1b, ORF2, and 3' UTR regions  |
| PRA-3000SD | <i>Cyclospora caytanensis</i>                           | Complete 18S rRNA gene sequence, and full ITS1 and ITS2 sequences  |
| VR-3249SD  | BK virus  | Complete genome  |
| VR-3251SD  | Human Bocavirus (HBoV)                                  | Fragments from the 5'UTR, NS1, NP1, VP1, VP2, and 3' UTR genes   |
| VR-3228SD  | Dengue virus type 1                                     | Fragments from the capsid, membrane, and envelope regions  |
| VR-3229SD  | Dengue virus type 2                                     | Fragments from the capsid, membrane, and envelope regions  |
| VR-3230SD  | Dengue virus type 3                                     | Fragments from the capsid, membrane, and envelope regions  |
| VR-3231SD  | Dengue virus type 4                                     | Fragments from the capsid, membrane, and envelope regions  |
| VR-3239SD  | Eastern equine encephalitis virus                       | Fragments from capsid, envelope (E1 and E2), and nonstructural genes NSP1, NSP3, and 3'UTR   |
| VR-3232SD  | Hepatitis B virus                                       | Fragments from the highly conserved precore, core, P, S, and X regions   |
| VR-3233SD  | Hepatitis C virus                                       | Fragments from 5'UTR and X-tail region (3'UTR)   |
| VR-3245SD  | Human immunodeficiency virus 1 (HIV-1)                  | Fragments from the 5' LTR, <i>gag</i> gene, <i>pol</i> gene (including protease, reverse transcriptase, and integrase regions), <i>tat</i> gene, <i>rev</i> gene, and <i>nef</i> gene; the construct also contains drug resistance mutations, including 41L, 67N, 70R, 103N, 181C, 215Y, and 90M |
| VR-3240SD  | Human papillomavirus 16                                 | Full length genome of human papillomavirus type 16 derived from a plasmid clone (ATCC® 45113D)   |
| VR-3241SD  | Human papillomavirus 18                                 | Full length genome of human papillomavirus type 18 derived from a plasmid clone (ATCC® 45152D)   |
| VR-3248SD  | Middle East respiratory syndrome coronavirus (MERS-CoV) | Fragments from the ORF1ab, ORF5, upper envelope (upE), ORF8b, nucleocapsid (N) protein gene, and 3' UTR regions  |
| BAA-2641SD | <i>Mycoplasma genitalium</i>                            | Fragments from the 16S gene, <i>mgpA</i> , and <i>gap</i>  |
| VR-3234SD  | Norovirus GI  | Fragments from the RNA-dependent RNA polymerase and VP1 (ORF1-ORF2 junction) regions   |
| VR-3235SD  | Norovirus GII   | Fragments from the RNA-dependent RNA polymerase, VP1 (ORF1-ORF2 junction), and VP2 regions   |
| VR-3236SD  | Saint Louis encephalitis virus                          | Fragments from pre-membrane, envelope, and nonstructural genes NS1, NS5, and 3'UTR   |
| VR-3237SD  | Sapovirus   | Fragments from the RNA-dependent RNA polymerase, VP1, and polyprotein regions  |
| BAA-2642SD | <i>Treponema pallidum</i>                               | Fragments from the <i>polA</i> , <i>tpr</i> , 23S gene, <i>arp</i> , 16S gene, <i>flaA</i> , 47kDa protein gene, and <i>bmp</i>  |
| VR-3197SD  | West Nile Virus   | Fragments from the 5'UTR region, anchored capsid protein C gene, capsid protein C gene, membrane glycoprotein precursor prM gene, envelope protein E gene, nonstructural protein NS1, NS2A, NS3, and NS5 genes, and the 3' UTR region of the West Nile Virus genome                              |

†Stabilized by Biomātrica the Biostability Company

# GENOMIC DNA FROM CELL LINES

Microarray, qPCR, biochip, and other molecular-based technologies are fundamental to the growth of the molecular diagnostic and predictive medicine industries. The increased use of these real-time, sensitive, rapid methods has created a demand for highly purified nucleic acids to serve as controls in the development and validation of these assays.

To support this need, ATCC has isolated purified genomic DNA from a number of highly characterized, authenticated cell lines from the collection, including those from cell lines within our Genetic Alteration Panels, which contain relevant oncological mutations. Each 2 µg, 20 µL preparation of high molecular weight genomic DNA is extracted and purified through an automated process that ensures consistency and the highest quality. Moreover, these products are validated through a variety of defined quality control procedures.

Here, we provide a full listing of our nucleic acid preparations from the cell biology collection that are organized by cancer type.

## Blood Cancers

| ATCC® No.    | Cell Line | Disease                      | Genetic Alteration† | Availability |
|--------------|-----------|------------------------------|---------------------|--------------|
| CCL-240D     | HL-60     | Acute myeloid leukemia       | MYC amplification   | Available    |
| CRM-CCL-119D | CCRF-CEM  | Acute lymphoblastic leukemia | KRAS p.G12D c.35G>A | Available    |
| CRM-CCL-155D | RPMI 8226 | Myeloma                      | KRAS p.G12D c.35G>C | Available    |
| CRM-TIB-161D | HuT 78    | Lymphoblast, Sezary Syndrome | KRAS Wild type      | Available    |
| TIB-202D     | THP-1     | Acute myeloid leukemia       | NRAS p.G12D         | Available    |

## Breast Cancer

| ATCC® No.   | Cell Line  | Disease                 | Genetic Alteration†                                 | Availability |
|-------------|------------|-------------------------|---|--------------|
| HTB-19D     | BT-20      | Breast carcinoma        | PIK3CA p.H1047R; EGFR amplification                 | Coming soon  |
| CRL-2321D   | HCC1143    | Breast ductal carcinoma | AKT1 amplification                                  | Available    |
| HTB-20D     | BT-474     | Breast ductal carcinoma | p.H61Q; Her 2 amplification                         | Available    |
| HTB-22D     | MCF7       | Breast adenocarcinoma   | CDKN2A p.0? c.1_471del471; PIK3CA p.E545K c.1633G>A | Available    |
| CRL-10317D  | MCF 10A    | Mammary epithelial      | (WT control)  | Available    |
| CRM-HTB-26D | MDA-MB-231 | Breast adenocarcinoma   | KRAS p.G13D c.38G>A                                 | Available    |

## Gastrointestinal Cancers

| ATCC® No. | Cell Line | Disease                | Genetic Alteration†                         | Availability |
|-----------|-----------|------------------------|---|--------------|
| CCL-222D  | COLO 205  | Colon adenocarcinoma   | N/A†  | Coming soon  |
| CCL-225D  | HCT-15    | Colon adenocarcinoma   | KRAS p.G13D; PIK3CA p.E545K; PIK3CA p.D549N | Coming soon  |
| CCL-227D  | SW620     | Colon adenocarcinoma   | N/A†  | Coming soon  |
| CCL-231D  | SW48      | Colon adenocarcinoma   | EGFR p.G719S                                | Coming soon  |
| CCL-238D  | SW1417    | Colon adenocarcinoma   | BRAF p.V600E                                | Coming soon  |
| CL-187D   | LS 180    | Colon adenocarcinoma   | KRAS p.G12D                                 | Coming soon  |
| CRL-2158D | LS1034    | Colon carcinoma        | N/A†  | Coming soon  |
| CRL-1739D | AGS       | Stomach adenocarcinoma | PIK3CA p.E545A                              | Coming soon  |

## Cancers of the Female Reproductive Tract

| ATCC® No. | Cell Line   | Disease                    | Genetic Alteration†        | Availability |
|-----------|-------------|----------------------------|----------------------------|--------------|
| HTB-111D  | AN3 CA      | Endometrium adenocarcinoma | PTEN p.R130fs; ERK p.P373S | Coming soon  |
| HTB-161D  | NIH:OVCAR-3 | Ovary adenocarcinoma       | AKT2 amplification         | Available    |

## Lung Cancers

| ATCC® No.    | Cell Line | Disease                       | Genetic Alteration†                    | Availability |
|--------------|-----------|-------------------------------|--|--------------|
| CRL-2868D    | HCC827    | Lung adenocarcinoma           | EGFR p.ELREA746del; EGFR amplification | Coming soon  |
| CRL-5883D    | NCI-H1650 | Lung adenocarcinoma           | N/A†                                   | Coming soon  |
| CRM-HTB-174D | NCI-H441  | Lung adenocarcinoma           | KRAS p.G12V c.35G>T                    | Available    |
| HTB-178D     | NCI-H596  | Lung adenosquamous carcinoma  | PIK3CA p.E545K; EGFR amplification     | Coming soon  |
| CRL-5908D    | NCI-H1975 | Lung non-small cell carcinoma | EGFR p.T790M; EGFR p.L858R             | Coming soon  |
| CRL-5922D    | NCI-H2087 | Lung non-small cell carcinoma | N/A†                                   | Coming soon  |

## Lung Cancers

| ATCC® No.    | Cell Line | Disease                       | Genetic Alteration <sup>†</sup> | Availability |
|--------------|-----------|-------------------------------|---------------------------------|--------------|
| CRL-5935D    | NCI-H2228 | Lung non-small cell carcinoma | N/A <sup>†</sup>                | Coming soon  |
| CRM-CCL-185D | A549      | Lung small cell carcinoma     | KRAS p.G125 c.34G>A             | Available    |
| CRL-2177D    | SW 1271   | Lung small cell carcinoma     | NRAS p.Q61R                     | Coming soon  |

## Melanocyte-derived Skin Cancers

| ATCC® No. | Cell Line | Disease                 | Genetic Alteration <sup>†</sup>     | Availability |
|-----------|-----------|-------------------------|-------------------------------------|--------------|
| CRL-1585D | C32       | Skin malignant melanoma | PTEN deletion; MET slight amplified | Coming soon  |
| HTB-68D   | SK-MEL-2  | Skin malignant melanoma | NRAS p.Q61R, TP53 p.G245S           | Coming soon  |

## Pancreatic Cancers

| ATCC® No.     | Cell Line  | Disease                   | Genetic Alteration <sup>†</sup> | Availability |
|---------------|------------|---------------------------|---------------------------------|--------------|
| CRM-CRL-1420D | MIA PaCa-2 | Pancreatic carcinoma      | KRAS p.G12C c.34G>T             | Available    |
| CRM-CRL-3211D | PSN-1      | Pancreatic adenocarcinoma | KRAS p.G12R c.34G>C             | Available    |

## Urinary Bladder Cancers

| ATCC® No. | Cell Line | Disease                                     | Genetic Alteration <sup>†</sup> | Availability |
|-----------|-----------|---|---------------------------------|--------------|
| HTB-2D    | RT4       | Urinary bladder transitional cell carcinoma | ERK p.A109A                     | Coming soon  |

<sup>†</sup>The mutation data was obtained from the Sanger Institute Catalogue Of Somatic Mutations In Cancer web site, <http://www.sanger.ac.uk/cosmic> Bamford *et al.* (2004) The COSMIC (Catalogue of Somatic Mutations in Cancer) database and website. Br J Cancer, 91,355-358. ATCC and the Sanger Institute provide these data in good faith, but make no warranty, express or implied, nor assumes any legal liability or responsibility for any purpose for which the data are used.

<sup>†</sup>The mutation information potential for this cell line may be found in the COSMIC or other public databases.

# CERTIFIED REFERENCE MATERIALS

The inherent variability of biological materials brings unique challenges to establishing standards for molecular-based assays. Genomic reference materials produced under an ISO Guide 34:2009 accredited process offer confirmed identity, well-defined characteristics, and an established chain of custody, all qualities essential to their effectiveness as standards in research and development. Here, we provide a full listing of available nucleic acid certified reference materials extracted from ATCC Genuine Cultures® and cell lines. Each of these certified reference materials is ideal for challenging assay performance, comparing or validating test methods, and establishing assay sensitivity and specificity.

## Quantitative Mycoplasma DNA CRM

| ATCC® No.*  | Source Organism                 | Strain                   | Type Strain | Sequenced Genome |
|-------------|---------------------------------|--------------------------|-------------|------------------|
| qCRM-15531D | <i>Mycoplasma pneumoniae</i>    | FH strain of Eaton Agent | Y           |                  |
| qCRM-17981D | <i>Mycoplasma hyorhinis</i>     | BTS-7                    | Y           |                  |
| qCRM-19610D | <i>Mycoplasma gallisepticum</i> |                          | Y           |                  |
| qCRM-19989D | <i>Mycoplasma fermentans</i>    | PG18                     | Y           | Y                |
| qCRM-23064D | <i>Mycoplasma salivarium</i>    |                          | Y           |                  |
| qCRM-23206D | <i>Acholeplasma laidlawii</i>   | PG8                      | Y           | Y                |
| qCRM-23714D | <i>Mycoplasma orale</i>         | CH 19299                 | Y           |                  |
| qCRM-23838D | <i>Mycoplasma arginine</i>      | G230                     | Y           |                  |
| qCRM-25204D | <i>Mycoplasma synoviae</i>      | WVU 1853                 | Y           |                  |
| qCRM-27545D | <i>Mycoplasma hominis</i>       |                          |             |                  |

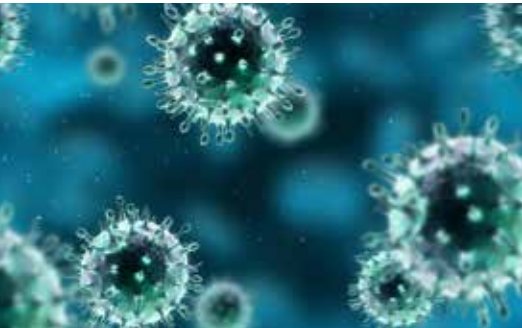
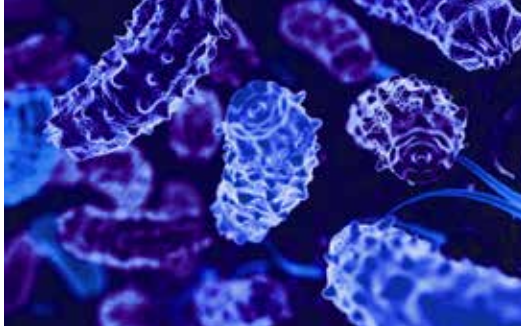
\*Each qCRM is quantitated for genome copy number per microliter.

## Human KRAS Mutation DNA CRM

| ATCC® No.     | Item Description                   | Designation | KRAS Mutation  | ATCC® Source |
|---------------|------------------------------------|-------------|----------------|--------------|
| CRM-CCL-119D  | Human acute lymphoblastic leukemia | CCRF-CEM    | p.G12D c.35G>A | CRM-CCL-119  |
| CRM-CCL-155D  | Human myeloma                      | RPMI 8226   | p.G12D c.35G>C | CRM-CCL-155  |
| CRM-CCL-185D  | Human lung carcinoma               | A-549       | p.G12S c.34G>A | CRM-CCL-185  |
| CRM-CRL-1420D | Human pancreatic carcinoma         | MIA PaCa-2  | p.G12C c.34G>T | CRM-CRL-1420 |
| CRM-CRL-3211D | Human pancreas adenocarcinoma      | PSN-1       | p.G12R c.34G>C | CRM-CRL-3211 |
| CRM-HTB-174D  | Human lung adenocarcinoma          | NCI-H441    | p.G12V c.35G>T | CRM-HTB-174  |
| CRM-HTB-26D   | Human breast adenocarcinoma        | MDA-MB-231  | p.G13D c.38G>A | CRM-HTB-26   |
| CRM-TIB-161D  | Human lymphoblast, Sezary Syndrome | HuT 78      | Wild type      | CRM-TIB-161  |



Can't find the nucleic acids you need? ATCC offers a nucleic acid extraction service for any of the Genuine Cultures® listed in our catalog. Contact us today at [tech@atcc.org](mailto:tech@atcc.org) to inquire.



See our online catalog at [www.atcc.org/genuinenucleics](http://www.atcc.org/genuinenucleics) for a full description of each item.

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