



# Certified Reference Material

## Biological standards with unprecedented reliability — Only from ATCC

ATCC is pleased to provide Certified Reference Material (CRM) produced under ISO Guide 34:2009 and ISO/IEC 17025:2005 accredited and ISO 9001:2008 certified laboratories.

### Why use certified reference materials?

The inherent variability of biological materials brings unique challenges to establishing standards for *in vitro* model systems and to establishing ISO compliant processes to produce them. Biological reference materials produced under an ISO Guide 34:2009 accredited process have confirmed identity, well-defined characteristics, and an established chain of custody. These qualities make CRMs ideal as biological standards for research and development purposes.

### What are the features of ATCC Certified Reference Materials?

- Optimized for homogeneity and consistency from lot to lot
- Tested to a stated level of confidence, where appropriate
- Traceable pedigree to the ATCC seed culture
- Verified using polyphasic (genotypic and phenotypic) testing to confirm identity
- Unique level of accuracy and lot specific results
- Comprehensive documentation, including property values and their uncertainty calculations, expiration dating, and serial numbering of vials

### What are the benefits of Certified Reference Materials from ATCC?

Certified Reference Materials offer the highest level of quality assurance, accuracy, and traceability. They give you complete confidence that your results are reliable and reproducible.

### When are ATCC Certified Reference Materials recommended for use?

- Establishing sensitivity, linearity, and specificity during assay validation or implementation
- Challenging assay performance
- Validating or comparing test methods
- Testing and calibration in ISO 17025:2005 labs that stipulate the use of reference materials
- Benchmarking critical assay performance for regulatory submissions and production lot release
- Pharmacopeia compendial tests

**TABLE 1.** Current Culture Selections

ATCC® No.	Item Description	Designation
<b>Cell Lines*</b>		
CRM-CCL-2™	Human cervical adenocarcinoma	HeLa
CRM-CRL-1550™	Human epidermoid cervical carcinoma	Ca Ski
CRM-HTB-31™	Human cervical carcinoma	C-33 A
CRM-CCL-185™	Human lung carcinoma	A549
CRM-HTB-174™	Human lung adenocarcinoma	NCI-H441
CRM-CCL-119™	Human acute lymphoblastic leukemia	CCRF-CEM
CRM-HTB-26™	Human breast adenocarcinoma	MDA-MB-231
CRM-CRL-1420™	Human pancreatic carcinoma	MIA PaCa-2
CRM-TIB-161™	Human lymphoblast, Sezary Syndrome	HuT 78
CRM-CCL-155™	Human myeloma	RPMI 8226
CRM-CRL-3211™	Human pancreas adenocarcinoma	PSN-1
<b>Bacteria</b>		
CRM-6633™	<i>Bacillus subtilis subsp. spizizenii</i>	NRS-231
CRM-11437™	<i>Clostridium sporogenes</i>	L.S. McClung 2006
CRM-8739™	<i>Escherichia coli</i>	Crooks
<b>Bacteria (continued)</b>		
CRM-11229™	<i>Escherichia coli</i>	AMC 198
CRM-9341™	<i>Kocuria rhizophila</i>	FDA strain PCI 1001
CRM-9027™	<i>Pseudomonas aeruginosa</i>	R. Hugh 813
CRM-27853™	<i>Pseudomonas aeruginosa</i>	Boston 41501
CRM-14028™	<i>Salmonella subsp. enterica</i>	CDC-6516-60
CRM-6538™	<i>Staphylococcus subsp. aureus</i>	FDA 209
CRM-12228™	<i>Staphylococcus epidermidis</i>	FDA strain PCI 1200
<b>Yeast and Fungi</b>		
CRM-16404™	<i>Aspergillus brasiliensis</i>	WLRI 034 (120)
CRM-10231™	<i>Candida albicans</i>	3147

\*See below and opposite for more information on CRM cell lines tested for KRAS mutations.



## CRM Testing Panels

ATCC has organized CRM strains based on federal guidelines and regulations, as well as the needs of industry and research. Each panel comprises the same CRM materials you've come to trust, produced by ATCC under an ISO Guide 34:2009 process to confirm identity, characteristics, and chain of custody. Each panel is offered at bulk discount pricing, allowing you to take advantage of added cost savings when compared to individual items.

**TABLE 2.** ATCC Antimicrobial Effectiveness Testing Panel (ATCC® MP-16™)

ATCC® No.	Item Description	Designation	Isolation
CRM-6538™	<i>Staphylococcus subsp. aureus</i>	FDA 209	Human lesion
CRM-8739™	<i>Escherichia coli</i>	Crooks	Feces
CRM-9027™	<i>Pseudomonas aeruginosa</i>	R. Hugh 813	Outer ear infection
CRM-10231™	<i>Candida albicans</i>	3147	Man with bronchomycosis
CRM-16404™	<i>Aspergillus brasiliensis</i>	WLRI 034 (120)	Blueberry, North Carolina

**TABLE 3.** ATCC Microbial Enumeration Testing Panel (ATCC® MP-17™)

ATCC® No.	Item Description	Designation	Isolation
CRM-6538™	<i>Staphylococcus subsp. aureus</i>	FDA 209	Human lesion
CRM-6633™	<i>Bacillus subtilis subsp. spizizenii</i>	NRS 231	Unknown
CRM-9027™	<i>Pseudomonas aeruginosa</i>	R. Hugh 813	Outer ear infection
CRM-10231™	<i>Candida albicans</i>	3147	Man with bronchomycosis
CRM-16404™	<i>Aspergillus brasiliensis</i>	WLRI 034 (120)	Blueberry, North Carolina

## CRM Nucleic Acids

ATCC CRM nucleic acids are isolated from a variety of biological materials that meet unique research and assay development needs.


**TABLE 4.** 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

**TABLE 5.** Quantitative Mycoplasma DNA CRM

ATCC® No.	Item Description	Designation
qCRM-15531D	<i>Mycoplasma pneumoniae</i>	FH strain of Eaton Agent [NCTC 10119]
qCRM-17981D	<i>Mycoplasma hyorhinis</i>	BTS-7 [ATCC 23234, PG 42, NCTC 10130]
qCRM-19610D	<i>Mycoplasma gallisepticum</i>	[NCTC 10115, PG 31, X95]
qCRM-19989D	<i>Mycoplasma fermentans</i>	PG18 [G, NCTC 10117]
qCRM-23064D	<i>Mycoplasma salivarium</i>	[H110, NCTC 10113, PG 20]
qCRM-23206D	<i>Acholeplasma laidlawii</i>	PG8 [NCTC 10116, PG8, A]
qCRM-23714D	<i>Mycoplasma orale</i>	CH 19299 [NCTC 10112]
qCRM-23838D	<i>Mycoplasma arginine</i>	G230 [NCTC 10129]
qCRM-25204D	<i>Mycoplasma synoviae</i>	WVU 1853 [NCTC 10124]
qCRM-27545D	<i>Mycoplasma hominis</i>	[LBD-4]

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

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