October 2012

ATCC | THE ESSENTIALS OF LIFE SCIENCE RESEARCH GLOBALLY DELIVERED™

cell passages

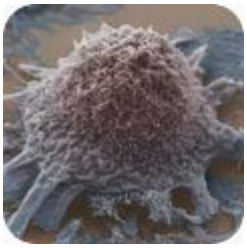
In this issue:

ATCC Tumor Cell Panels

ATCC Tumor Cell Panels harness the combined forces of genomic data and highly reliable, authenticated ATCC tumor cell lines to provide researchers with solid experimental platforms they can use to accelerate their cancer research and drug discovery.

This month Cell Passages will feature the new Molecular Signature Collection, but be sure to check out our other tumor cell panels.

View all available panels ▸



p53 – Targeting cancer's soft spot

The p53 protein, encoded by TP53, is inactivated in approximately 50% of human cancers, highlighting its pivotal role in the prevention of tumorigenesis. How p53 functions to suppress malignant growth, however, remains the subject of intense research. Next generation sequencing has revealed that the majority of p53-inactivating mutations reside in the one of six 'hotspot' codons. Mutations in codons 248 and 273 affect the ability of p53 to activate transcription, while mutations in codons 175, 245, 249 and 282 affect the structure of p53 (either at a local or global level)[1]. This information will help investigators understand, mechanistically, how specific mutations affect the ability of p53 to suppress tumor growth, while facilitating the development of drugs targeted directly at specific mutations.

[1]Brown, C. J., Cheok, C. F., Verma, C. S., and Lane, D. P., Reactivation of p53: from peptides to small molecules. *Trends Pharmacol Sci* 32 (1), 53 (2011).

Share with others:

Events and Conferences

Association of Molecular Pathology (AMP)

Long Beach, CA
October 25 – 27, 2012
Booth #341

PlanetConnect Bristol-Meyers Squibb (BMS) Symposium

Princeton, NJ
October 29 – 30, 2012
Booth #119

Learn more ▸

ATCC Publications

ATCC® Primary Cell Culture Guide

Tips and techniques for culturing Primary Cells.

ATCC® Animal Cell Culture Guide

Tips and techniques for continuous cell lines.

ATCC® hTERT Cell Culture guide

Tips and techniques for culturing hTERT immortalized cells.

Cell Culture Conversation

Check out the Cell Culture Conversation for tips and advice on how to get the best results from your cell cultures.

Engage now ▸

p53 "hotspot" mutation panel – *Now Available*

The first set in our new Molecular Signature Tumor Cell Panels collection has been released as the ATCC® p53 Hotspot Mutation Human Cell Line Panels. ATCC sequenced the TP53 gene in our p53-mutant tumor cell lines, assessed both expression and

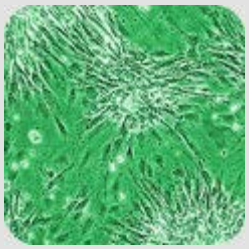
functionality of the resulting mutant p53 protein, and arranged them according to their precise mutation profiles.

To provide a complete experimental platform, each panel incorporates a blend of cell lines harboring p53 mutations at different “hotspots,” along with relevant wild type and p53-null cell lines when available.

Learn more ▸

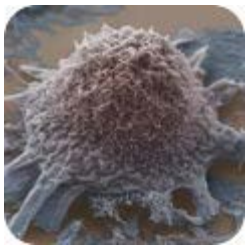
Certified Reference Material-KRAS Cell and DNA Panels – *Coming Soon!*

Two new Certified Reference Material (CRM) Testing Panels are currently in production: CRM-KRAS Cell Panel and CRM-KRAS DNA Panel. These panels will feature cultures that contain the seven KRAS mutations most commonly associated with tumor progression, including p.G12S, p. G12V, p.G12A, p.G12D, p.G13D, p.G12C, and p.G12R. Each panel will also include a WT for use as a control. Bookmark the page.



Gene of the Month

Retinobastoma - The Retinoblastoma (RB1) tumor suppressor gene encodes a protein (Rb) that regulates cell proliferation by controlling progression through the G1 checkpoint of the cell cycle. Rb interacts with many other regulatory proteins, and dysfunctional mutants are observed in a wide range of cancers. View available ATCC® RB1 mutant cell lines.



Tumor Cell Panels in Cancer Research and Drug Discovery

This Webinar will introduce a methodology for choosing cell lines and cell line panels that focuses on the most common genetic alterations that occur across tumor types, and aims to improve model development for testing small molecules or biologics for cancer drug development. View webinar now

ATCC - 10801 University Boulevard, Manassas, VA 20110