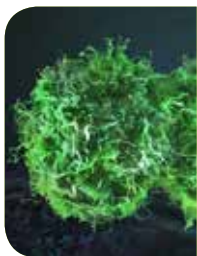




# Cancer Resources

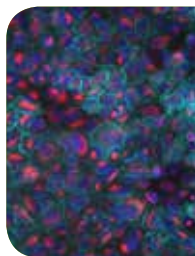
ATCC has been supporting cancer research for over 50 years. We currently provide over 4,000 fully characterized cell lines and novel cell-based models to support the global cancer research community in understanding how cancer manifests itself and discovering effective treatment options. ATCC Cancer Resources include:



## CRISPR/Cas9-Gene Edited Isogenic Cell Lines

EML4-ALK Fusion A549 Isogenic Cell Line  
NRAS Mutant A375 Isogenic Cell Line  
KRAS Mutant A375 Isogenic Cell Line  
IDH1 Mutant Isogenic Cell Line  
IDH2 Mutant Isogenic Cell Line

[www.atcc.org/isogenic](http://www.atcc.org/isogenic)



## Epithelial-mesenchymal Transition (EMT) Reporter Cell Line

CRISPR/Cas9 gene-edited  
Vimentin-RFP fusion protein  
Strong RFP signal upon EMT induction  
Sensitive to EMT inhibitors

[www.atcc.org/EMT](http://www.atcc.org/EMT)



## Tumor Cell Panels

Tumor Panels by Genetic Alteration  
Tumor Panels by Tissue Type  
p53 Hotspot Mutation Cell Panels

[www.atcc.org/tcp](http://www.atcc.org/tcp)



## Angiogenesis Resources

Angio-Ready™ Angiogenesis Assay System  
Primary Endothelial and Smooth Muscle Cells  
Cardiovascular Cell Lines  
CellMatrix Basement Membrane Gel

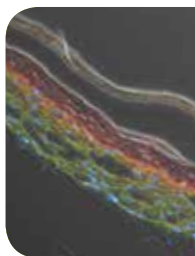
[www.atcc.org/angio](http://www.atcc.org/angio)



## Cell Health & Viability

MTT and XTT Assays  
Reliablue™ Cell Viability Assay  
Mycoplasma Detection Kit  
CoolCell® LX Alcohol-free Cryopreservation Container

[www.atcc.org/cellhealth](http://www.atcc.org/cellhealth)



## Complete Primary Cell Solutions

Human Airway, Renal, Epidermal, Mammary, and More  
Complete Growth Media and Supplements  
hTERT-immortalized Primary Cells

[www.atcc.org/primarycells](http://www.atcc.org/primarycells)



## Cell Line Genomic DNA

Quantitative DNA  
Highly Purified DNA  
Certified Reference Material DNA

[www.atcc.org/celldna](http://www.atcc.org/celldna)



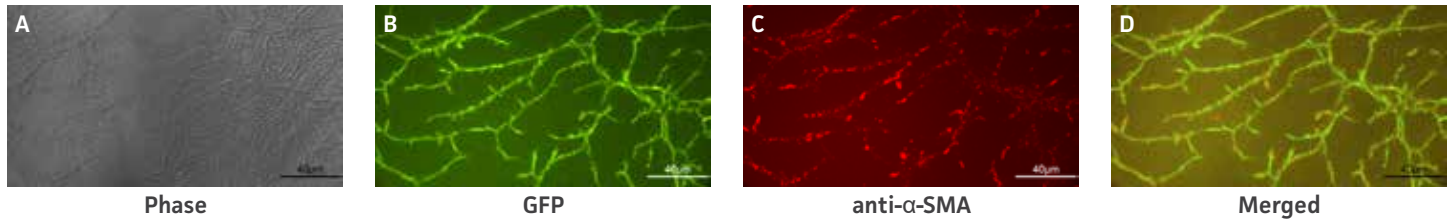
## Custom Solutions

Custom Services  
Custom Cell Production and Manufacturing  
Cell Line Development  
Cell Line Authentication  
Biorepository Services<sup>SM</sup>

[www.atcc.org/services](http://www.atcc.org/services)

## Angio-Ready™, a tool for high-throughput angiogenesis studies

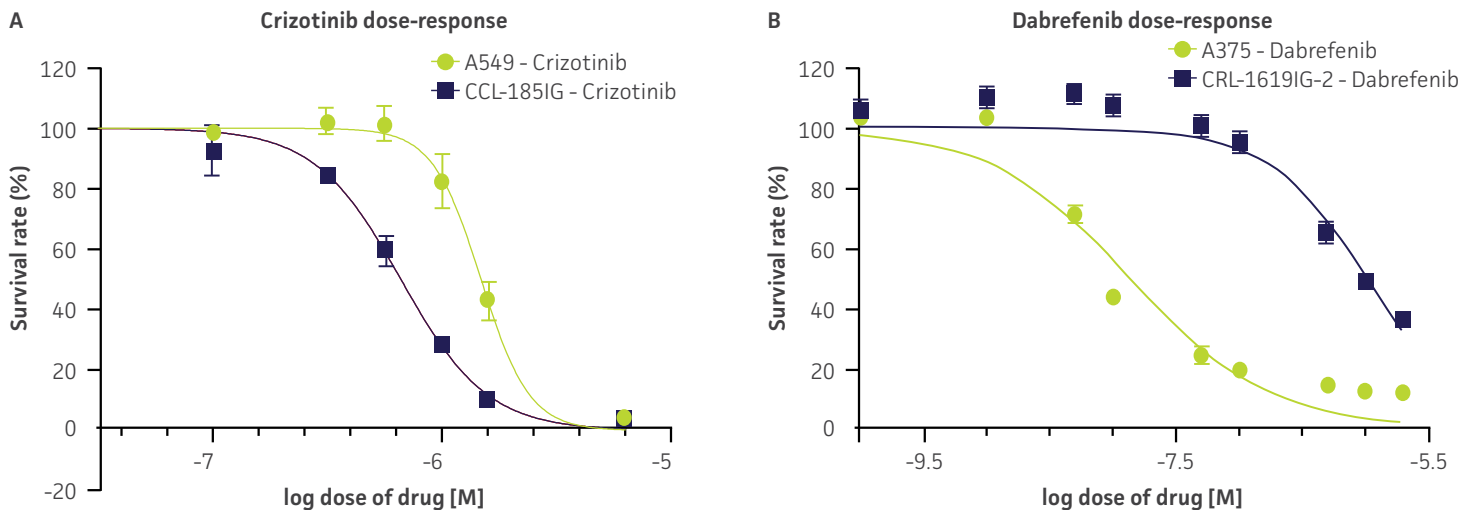
Angio-Ready™ was engineered at ATCC to provide researchers with an assay-ready kit to measure the growth of new blood vessels<sup>1</sup>.



**FIGURE 1.** Establishment of TeloHAEC-GFP and hTERT-MSC co-culture angiogenesis. TeloHAEC-GFPs co-cultured with hTERT-MSCs for 7 days in the optimized angiogenesis medium displayed A) 3D tubule structures and B) a long branching organization C) that exhibited immuno-reactivity to an  $\alpha$ -SMA antibody, which D) co-localized with the TeloHAEC-GFP.

## Isogenic cell lines

Clinically relevant cell models are critical for studies of molecular and cellular mechanisms of tumors, as well as for drug screening for cancer. With genome editing tools such as CRISPR/Cas9, ATCC has created isogenic cell lines with mutants of key oncogenes, such as EML4-ALK fusion and NRAS mutation. These cell lines are ideal for identifying novel, personalized treatment regimens<sup>2</sup>.



**FIGURE 2.** (A) EML4-ALK Fusion-A549 Isogenic Cell Line (ATCC® CCL-185IG™) is sensitive to ALK signaling pathway inhibition. A549 (ATCC® CCL-185™) and CCL-185IG cells were treated with the indicated concentrations of ALK inhibitor crizotinib and cell survival was determined via live cell analysis. (B) NRAS Q61K Mutant A375 Isogenic Cell Line (ATCC® CRL-1619IG-2™) is resistant to BRAF signaling pathway inhibition. A375 (ATCC® CRL-1619™) and CRL-1619IG-2 cells were treated with the indicated concentrations of BRAF inhibitor dabrafenib and cell survival was determined as in A).

## References

1. Zou C, Shapiro BS. *In vitro* Angiogenesis Assay Using the ATCC® Angio-Ready™ System. Application Note Number 19, 2016.
2. Enameh, MS, et al. The generation of an EML4-ALK fusion NSCLC isogenic cell line relevant for drug discovery and development. Application Note Number 25, 2016.