ATCC | Credible leads to Incredible™

Technical Data Sheet: HPAEC-BMI1

ATCC® Number	CRL-4065™
Organism	*Homo sapiens*
Tissue/Disease Source	Pulmonary artery, normal
Product Description	HPAEC-BMI1 is a clonal cell line immortalized by stably expressing human BMI1 gene in primary pulmonary artery endothelial cells. These cells retain important endothelial cell characteristics and functions such as express CD31/ PECAM-1, uptake acetylated low density lipoprotein (AcLDL), and form capillary-like tubes on a basement membrane matrix.
Application	This immortalized cell line is useful for cardiovascular disease research, angiogenesis studies, drug screening and toxicology testing.

Cell Morphology

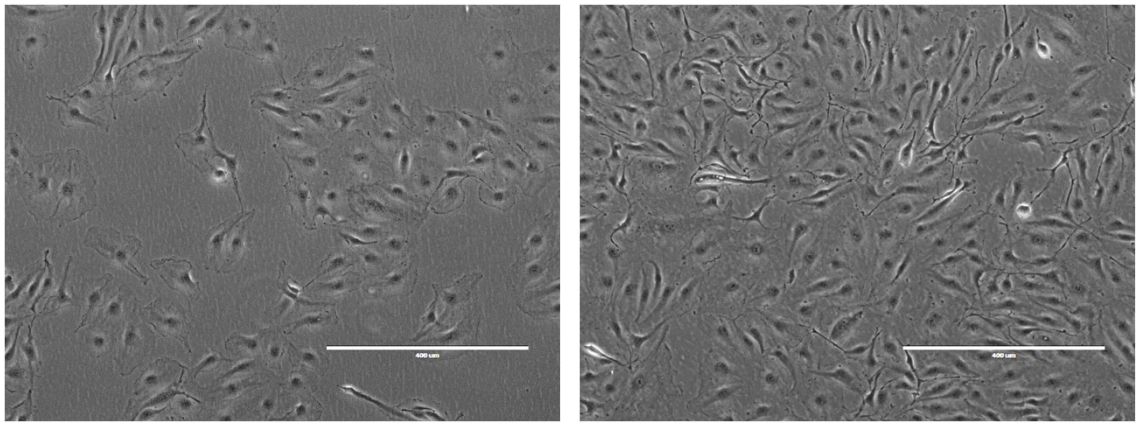

Figure 1. Cell morphology of HPAEC-BMI1. Cells were maintained in ATCC recommended culture conditions. Cell morphology in low (left) and high (right) densities were observed under microscopy and images were captured by digital camera. Doubling time: Approximately 30 hours

CD31 expression

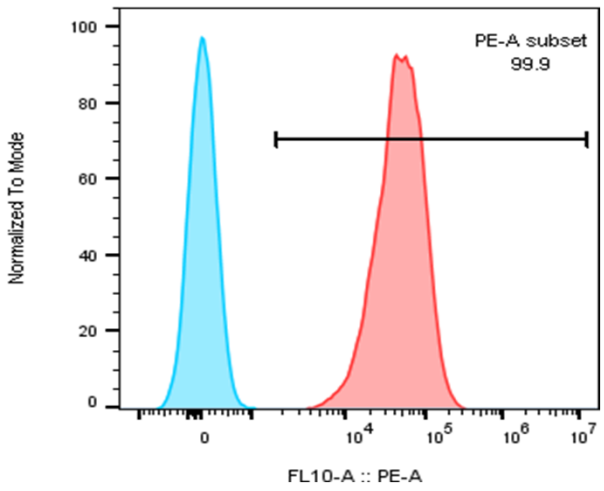

Figure 2: Flow cytometric analysis of CD31 expression in HPAEC-BMI1 cells. Cells were harvested and stained with either PE Mouse Anti-Human CD31 antibody (red histogram) or PE Mouse IgG1, κ Isotype Control antibody (blue histogram). Flow cytometry was performed on a Beckman Coulter CytoFlex Cytometer.

AcLDL uptake

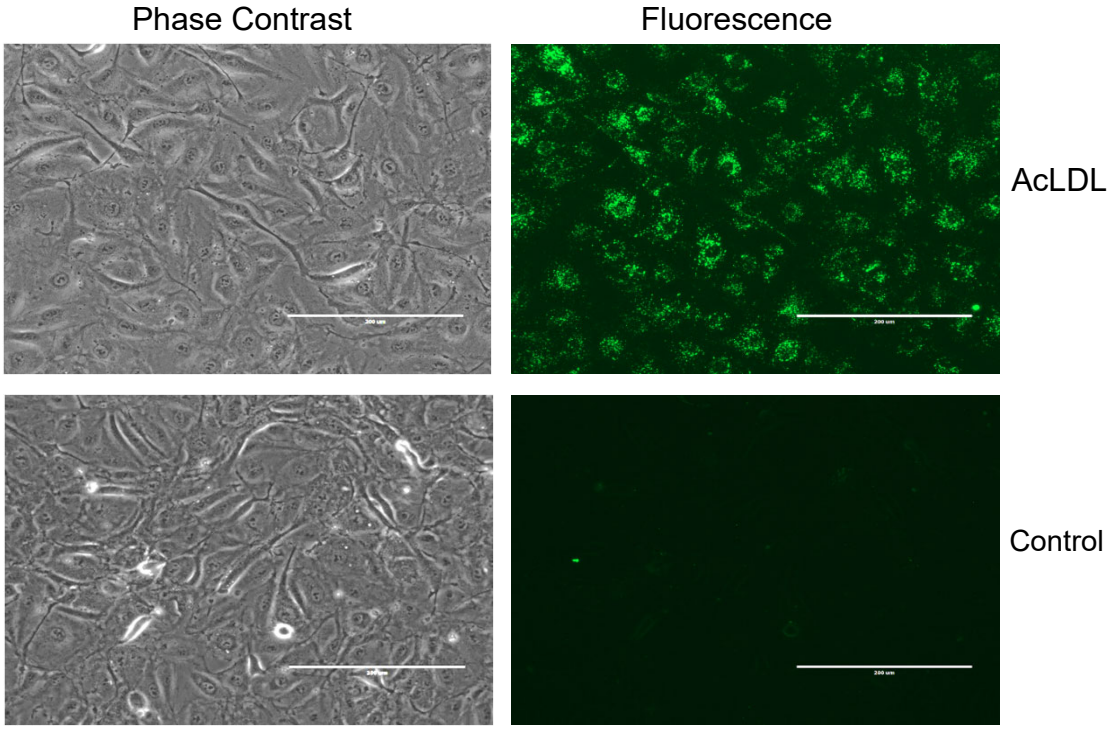

Figure 3 : Uptake of AcLDL by HPAEC-BMI1 cells. Cells were cultured on four-well chamber slides and incubated with Alexa Fluor™ 488 AcLDL for 4 hours. After, cells were washed with culture medium, then while in culture medium, were viewed and photographed using an EVOS fluorescence microscope under GFP fluorescence and transmitted light. Cells in culture medium without Alexa Fluor™ 488 AcLDL were used as negative control.

Effect of sunitinib on capillary-like tube formation

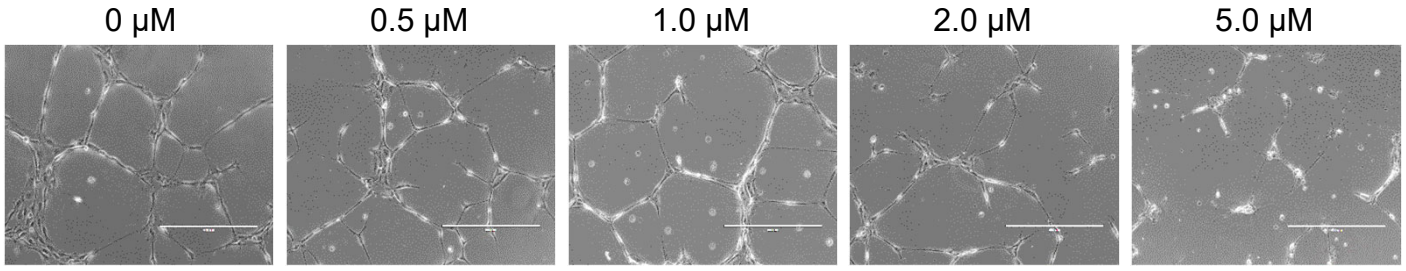

Figure 4: Sunitinib inhibits the formation of capillary-like tubes of HPAEC-BMI1 cells. The tube formation assay was performed in a 24-well plate. Cells in medium containing 0, 0.5, 1.0, 2.0, and 5.0 µM sunitinib (Sigma, #PZ0012) were seeded onto a basement membrane matrix (Cell Basement Membrane; ATCC ACS-3035™). After incubation at 37 °C for 24 hours, the capillary-like tubes were viewed and photographed using an EVOS fluorescence microscope under transmitted light.

Effect of sunitinib on cell migration

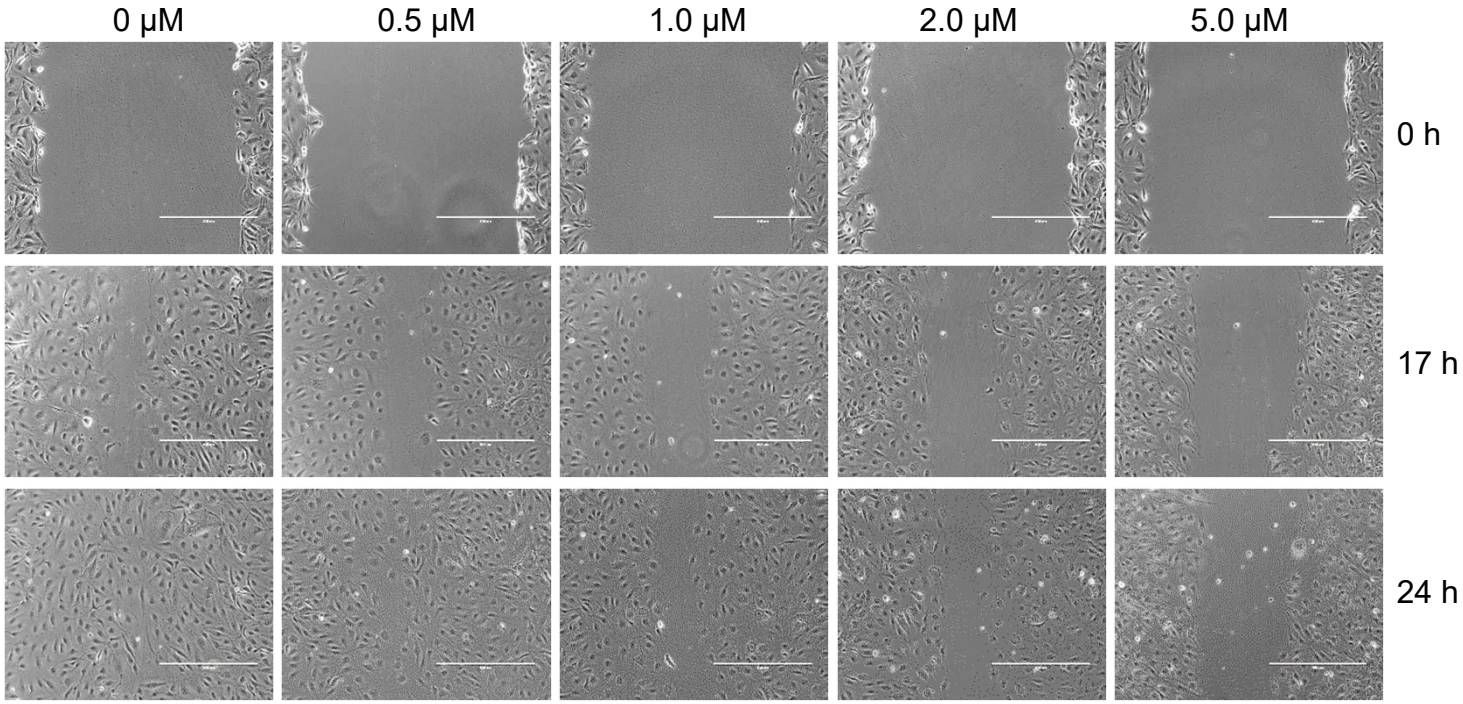

Figure 5: Sunitinib inhibits the migration of HPAEC-BMI1 cells. Cells were grown to full confluence in 12-well plates and then wounded with a sterile 1200 µL pipette tip. Medium containing 0, 0.5, 1.0, 2.0 , and 5.0 µM sunitinib were added to the wells. The wound gap was viewed and photographed at 0, 17, and 24h using an EVOS fluorescence microscope under transmitted light.