

Human CLDN18.2/MIA PaCa-2 Stable Cell line

I. Product Information:

Catalog Number:	C3002
Cell Line Name:	MIA PaCa-2 stable cell clone expressing full-length human CLDN18.2 receptor
Gene Synonyms:	CLDN18.2
Gene Sequence:	Codon optimized from NP_001001026 (Met1-Val261)
Protein Structure:	Four span-transmembrane receptor
Host Cell:	MIA Paca-2, a human pancreatic carcinoma cell line
Quantity:	Two vials of frozen cells (10^6 cells/vial)
Stability:	>10 passages
Freeze Media:	90% FBS, 10% DMSO
Storage:	liquid nitrogen immediately upon receipt
Culture Medium:	DMEM with 10% FBS and 1ug/ml puromycin.
Mycoplasma Test:	Negative
Application:	Antibody binding assays, IHC/Western blot analysis, or use as cell immunogen

II. Background:

Claudin-18 (CLDN18) is a member of a large family of four-span transmembrane proteins called Claudins. These proteins are the essential components of the mammalian tight junctions (TJs) in epithelial cells. Claudin-18 has two splice variants, 18.1 and 18.2. While CLDN18.1 is specifically expressed in the lung tissue, CLDN18.2 expression in normal tissue is more restricted and is only detected in small patches of stomach mucosal. CLDN18.2 expression is elevated in many types of epithelial cancers including stomach, esophagus, pancreatic and ovarian cancers. The expression of CLDN18.2 is not only detected in primary tumors, but also in the metastatic sites. Therefore, CLDN18.2 is an ideal target for monoclonal antibody-based cancer therapies.

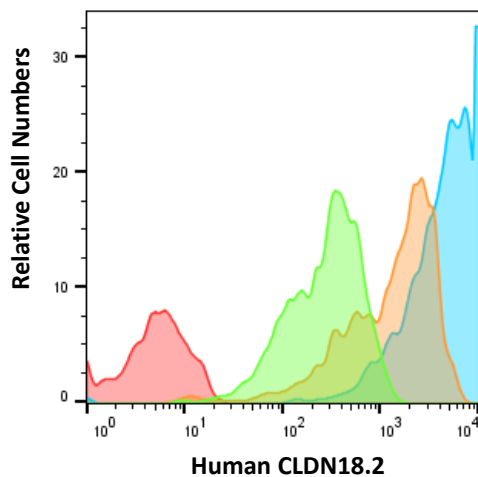
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III. Representative Data:

Detection of human CLDN18.2 expression on human CLDN18.2/MIA PaCa-2 stable cells using a monoclonal antibody specific for human CLDN18.2 at three different concentrations (2.5, 0.25 and 0.025 ug/ml).



IV. Thawing and Subculturing:

1. Remove the cell vial from liquid nitrogen tank and thaw cells quickly in a 37°C water bath.
2. In a T25 culture flask, add 10ml cell culture media which has been pre-warmed in a 37°C water bath for 30 minutes.
3. Transfer all the cells in the vial into the flask and place it inside of a CO2 incubator with 5-8% CO2.
4. The cell doubling time should be 18-24 hours. Split the cells 1:5 or 1:10 every 3-5 days or when the cells are confluent.

V. References:

Deer EL. *et al.* (2010): "Phenotype and genotype of pancreatic cancer cell lines". *Pancreas*, 39(4), p425-35

Türeci O. *et al.* (2011): "Claudin-18 gene structure, regulation, and expression is evolutionary conserved in mammals". *Gene*, 481(2), p83-92.

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Sahin U. *et al.* (2008): "Claudin-18 Splice Variant 2 Is a Pan-Cancer Target Suitable for Therapeutic Antibody Development". Clin. Cancer Res. 14 (23) p7624-7634.

Niimi T. *et al.* (2001): "claudin-18, a Novel Downstream Target Gene for the T/EBP/NKX2.1 Homeodomain Transcription Factor, Encodes Lung- and Stomach-Specific Isoforms through Alternative Splicing". Mol. Cell. Biol. 21(21), p7380-7390.

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