

DESCRIPTION

Cell Line Name	Human CLDN18.2-Luciferase-MIA PaCa2 stable cell line (HuCLDN18.2-Luc-MiaPaCa2)
Catalog Number	C3035
Gene Sequences	Human CLDN18.2: NP_001001026 (Met1-Val261); Firefly luciferase: AFE85520.1
Host Cell	MiaPaca2, human pancreatic carcinoma cell line
Quantity	Two vials of frozen cells (2×10^6 per vial)
Culture Medium	DMEM with 10% FBS, 1 μ g/ml puromycin, and 250 μ g/ml hygromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

BACKGROUND

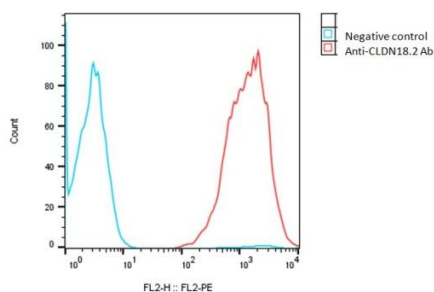
Claudin-18 (CLDN18) is a member of a large family of four-span transmembrane proteins called Claudins. These proteins are the essential components of the mammalian tight junctions (TJs) in epithelial cells. Claudin-18 has two splice variants, 18.1 and 18.2. While CLDN18.1 is specifically expressed in 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.

THAWING AND CULTURING

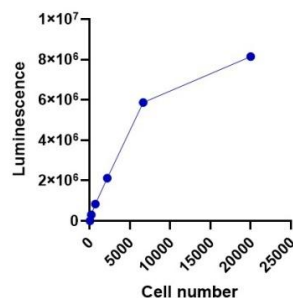
- Remove the cell vial from liquid nitrogen tank and thaw cells quickly in a 37°C water bath
- Transfer the cells to a 15 ml centrifuge tube and slowly add 5 ml of pre-warmed complete growth medium
- Centrifuge the cells at 200x g for 5 min
- Remove the supernatant
- Resuspend cell pellet with 7 ml of complete growth medium and transfer cells to a T25 flask
- Incubate cells in an incubator with 5% CO₂ at 37°C
- Split the cells twice a week or as needed.

DATA

- (A) Detection of human CLDN18.2 expression on human CLDN18.2-Luc-MiaPaca2 stable cells using a monoclonal antibody specific for human CLDN18.2 (Cat #A1008)
- (B) Luciferase activity measurement for human CLDN18.2-Luc-MiaPaca2 stable cells



(A)



(B)

REFERENCES

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