

Human CLDN18.1-DYK-CHO Stable Cells

I. Product Information:

Catalog Number:	C1002
Cell Line Name:	CHO suspension cell pool expressing full-length human CLDN18.1 receptor
Gene Synonyms:	CLDN18.1
Gene Sequence:	Codon optimized from Accession [#] NP_057453. A DYKDDDK tag is inserted between V144 and T145.
Protein Structure:	Four span-transmembrane receptor
Host Cell:	Suspension CHO
Quantity:	Two vials of frozen cells (20x10 ⁶ per vial)
Stability:	>10 passages
Culture Media:	50% CD-CHO (Gibco [#] 10743-029), 50% Ex-Cell CHO 5 Media (Sigma [#] C0363), supplemented with 8 mM L-Glutamine, 1x HT (Gibco [#] 11067030), 1x Penicillin-Streptomycin, and 10 µg/ml Puromycin.
Freeze Media:	Culture media with 10% DMSO
Storage:	liquid nitrogen immediately upon receipt
Mycoplasma Test:	Negative
Applications:	Antibody binding assays, IHC/Western blot analysis, or use as cell immunogen

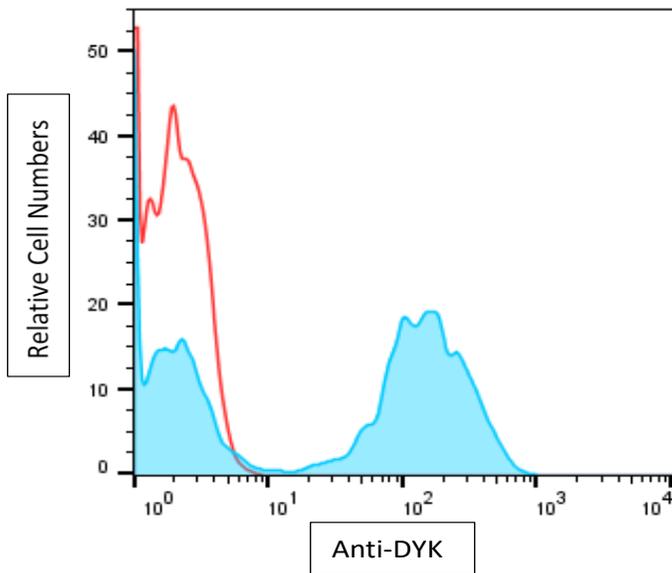
II. Background:

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 CLDN18.1 expression on CHO-S/Human CLDN18.1 cells using a mouse monoclonal antibody specific for the DYKDDDK peptide.



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 T250 shake flask, add 30ml 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 T250 shake flask and place it on a shaker inside of a CO₂ incubator with 5-8% CO₂. The shaker speed should be set at 120-150rpm.
4. The next day, count the cells using a hemocytometer. The viable cell density should be around 0.5-1x10⁶/ml and the cell viability should be more than 50%.
5. The cell doubling time should be 18-24 hours. Split the cells 1:5 or 1:10 every 2-3 days or when the cell density reached 6-8x10⁶/ml.

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V. 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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