Data Sheet (Cat.No.TMPY-06851)

TargetMol

Claudin-6 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	claudin 6
Protein Construction:	A DNA sequence encoding the human CLDN6 (P56747) (1-184) was expressed, with a polyhistidine tag and AVI tag at the C-terminus.Nanodisc is a versatile tool for studying membrane proteins. Using styrene-maleic acid (SMA) copolymer, membrane proteins can be extracted directly from prokaryotic and eukaryotic expression systems in the absence of detergents to preserve the protein structure and function better. Compared to membrane scaffold proteins (MSPs) nanodiscs, SMA nanodiscs also have the advantage of preserving proteins' nature by maintaining native lipids surrounded without introducing any heterologous proteins, which allows studies of protein structure and functions in a native-like environment. Predicted N terminal: Met 1
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P56747
Molecular Weight:	22.7 kDa (predicted); 23 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Immobilized Recombinant Human CLDN6 -Nanodisc Protein(His & AVI Tag), Biotinylated at 5 μg/mL (100 μL/well) on streptavidin precoated (2 μg/mL) can bind Anti-Human Claudin6 Antibody, Human IgG1, the EC50 is 2-6 ng/mL. 2.Loaded Recombinant Human Claudin-6 Protein, His Tag, Biotinylated, Nanodisc on SA Biosensor, can bind Anti-CLDN6 antibody with an affinity constant of 1.43nM as determined in BLI assay (Routinely tested).
Purity:	≥ 75 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as 0.2 μm filtered solution in 10 mM HEPES, 50 mM NaCl, pH 7.5 with glycerol as protectant.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -70°C or lower. Samples are stable for up to 12 months at -80°C. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Claudin-6 (CLDN6) belongs to the claudins family and is a transmembrane protein found in tight junctions with two extracellular loops and intracellular N and C tails. CLDN6 modulates the ion- and charge-specific permeability of the paracellular pathway in most epithelial tissues. It regulates the paracellular flux of cations in the kidney through forming heterotypic strands with other claudins and has a role in maintaining the lung epithelial barrier function. The CLDN6 gene is adjacent to another family member, CLDN9, on chromosome 16. Certain CLDN6-positive cancers, encompassing ovarian, endometrial, and testicular malignancies, have been shown to have their proliferation and invasiveness suppressed upon CLDN6 silencing.

Reference

Qu H, et al. CLDN6: From Traditional Barrier Function to Emerging Roles in Cancers. Int J Mol Sci. 2021.
Du H, et al. Claudin 6: Therapeutic prospects for tumours, and mechanisms of expression and regulation (Review). Mol Med Rep. 2021.
Brad Screnci, et. al. Atomic-level specificity of Claudin 6 monoclonal antibodies isolated for treating solid tumors [abstract]. In: Proceedings of the American Association for Cancer Research Annual Meeting 2022.
Huang L, et al. Downregulation of CLDN6 inhibits cell proliferation, migration, and invasion via regulating EGFR/AKT/mTOR signalling pathway in hepatocellular carcinoma. Cell Biochem Funct. 2020.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481