

Claudin-18 Protein, Human, Recombinant (His & Strep)

General Information

Synonyms: SFTA5;claudin 18;SFTPJ

Protein Construction: A DNA sequence encoding the Human CLDN18-Nanodisc (Full Length) (P56856-2) (Met1-Val261) was expressed, with a polyhistidine tag at the N-terminus and a Strep 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: His

Species: Human

Expression Host: HEK293 Cells

Accession: P56856-2

Molecular Weight: 32.34 kDa (predicted); 27.5 kDa (reducing conditions)

QC Testing

Biological Activity: 1. Loaded Anti-Human Claudin-18.2 antibody, human IgG1 on ProA Biosensor, can bind Recombinant Human Claudin-18.2-Nanodisc (Full Length) Protein, His & Strep Tag with an affinity constant of 3.43 nM as determined in BLI assay (Routinely tested).
2. Immobilized Recombinant Human CLDN18.2 -Nanodisc (Full Length) Protein(His & Strep Tag) at 5 µg/mL (100 µL/well) can bind Anti-Human claudin18.2 Antibody, Human IgG1, the EC50 is 4-12 ng/mL.

Purity: ≥ 75 % as determined by SDS-PAGE.

Endotoxin: Please contact us for more information.

Formulation: Supplied as sterile 10 mM HEPES, 50 mM NaCl, 1% glycerol, pH 7.5.

Preparation and Storage

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

Claudins family member Claudin18 (CLDN18) is a four-pass transmembrane protein with two extracellular loops and cytoplasmic N- and C-tails found in tight junctions. CLDN18 modulates paracellular permeability, polarity, and signaling. CLDN18 deficiency has been associated with atrophic gastritis, spasmodic polypeptide-expressing metaplasia (SPEM), and asthma. Lung-specific CLDN18.1 modulates alveolar epithelial type II (AT2) cell proliferation and organ size. Restoration of CLDN18.1 expression in human lung cancer cells has been shown to suppress proliferation, inhibiting the IGF-1R/AKT axes. Not expressed in other healthy tissues, gastric mucosa-specific isoform CLDN18.2 expression manifests in primary gastric cancers. CLDN18.2 at the surface of epithelial tumor cells is a target in antibody and CAR-therapies currently in development.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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