Data Sheet (Cat.No.TMPY-06902)

TargetMol

Claudin-9 Protein, Human, Recombinant

General Information

Protein Construction:	A DNA sequence encoding the human CLDN9 (O95484) (Met1-Val217) was expressed. Predicted N terminal: Met 1
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O95484
Molecular Weight:	22.9 kDa (predicted)

QC Testing

Biological Activity:	Immobilized Human CLDN9-VLP (Full Length) Protein at 5 μg/mL (100 μL/well) can bind Anti-Human CLDN9 Antibody,Human IgG1, the EC50 is 1-10 ng/mL.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Hepes, 150 mM NaCl, 10% Trehalose, pH 7.2.

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 -20°C to -80°C. Samples are stable for up to 12 months. 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-9 (CLDN9) belongs to the claudins family and is a transmembrane protein found in tight junctions with two extracellular loops and a cytoplasmic C tail. CLDN9 modulates the ion- and charge-specific permeability of the paracellular pathway in most epithelial tissues. It forms heterotypic interactions with other claudins to create cation-selective channels in the kidney and may contribute to the maintenance of alveolar barrier function in the lung. Deficiency is shown to be associated with autosomal recessive deafness, DFNB116. CLDN9 expression has been shown to be upregulated in certain types of cancer, such as endometrial cancer and hepatocellular carcinoma, and its knockdown has been found to reduce cell proliferation and migration in vitro.

Reference

Higashi, et al. Claudin-9 constitutes tight junctions of folliculo-stellate cells in the anterior pituitary gland. Sci Rep, 202

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Endo Y, et al. Claudin 9 is a novel prognostic biomarker for endometrial cancer. Int J Oncol. 2022.

Overgaard, et al. Roles for claudins in alveolar epithelial barrier function. Annals of the New York Academy of Sciences, 2012.

Liu, et al. Claudin-9 enhances the metastatic potential of hepatocytes via Tyk2/Stat3 signaling. The Turkish Journal of Gastroenterology, 2019.