

## Claudin-6 Protein, Human, Recombinant, Fluorescent, VLP

### General Information

Synonyms:	claudin 6
Protein Construction:	A DNA sequence encoding the human CLDN6 (P56747) (Met1-Val220) was expressed. This protein carries a GFP tag. Predicted N terminal: Met 1
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P56747
Molecular Weight:	50.31 kDa (predicted)

### QC Testing

Biological Activity:	Immobilized Human CLDN6-VLP (Full Length) Protein at 5 µg/mL (100 µL/well) can bind Anti-Human CLDN6 Antibody, Human IgG1, the EC50 is 5-25 ng/mL.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Supplied as solution in 50 mM HEPES, 150 mM NaCl, 10% Trehalose, pH 7.2.

### 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

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 Scenci, 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.

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