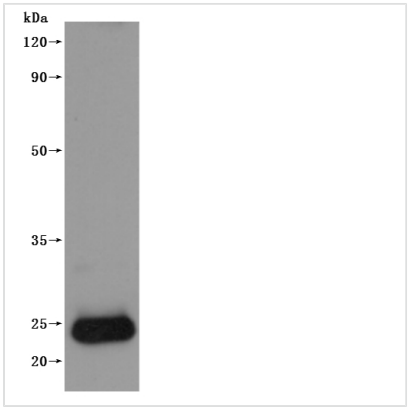
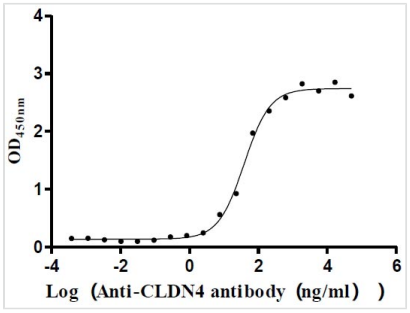
Recombinant Human Claudin-4 (CLDN4)-VLPs (Active)

Product Code	CSB-MP005506HU
Abbreviation	Recombinant Human CLDN4 protein-VLPs (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O14493
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human CLDN4 at 5 μg/mL can bind Anti-CLDN4 recombinant antibody (CSB-RA005506MA1HU), the EC_{50} is 29.56-50.75 ng/mL.
Sequence	MASMGLQVMGIALAVLGWLAVMLCCALPMWRVTAFIGSNIVTSQTIWEGLWM NCVVQSTGQMQCKVYDSLLALPQDLQAARALVIISIIVAALGVLLSVVGGKCTN CLEDESAKAKTMIVAGVVFLLAGLMVIVPVSWTAHNIIQDFYNPLVASGQKREM GASLYVGWAASGLLLLGGGLLCCNCPPRTDKPYSAKYSAARSAAASNYV
Source	Mammalian cell
Target Names	CLDN4
Expression Region	1-209aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 10xHis-tagged (This tag can be tested only under denaturing conditions)
Mol. Weight	23.4 kDa
Protein Length	Full Length
Image	



CSB-MP005506HU is detected by Mouse anti-6*His monoclonal antibody.



Activity
Measured by its binding ability in a functional ELISA. Immobilized Human CLDN4 at 5 μg/ml can bind Anti-CLDN4 recombinant antibody (CSB-RA005506MA1HU), the EC_{50} is 29.56-50.75 ng/mL.

Description

This Human Claudin-4 (CLDN4) recombinant protein was produced in mammalian cell, where the gene sequence encoding human CLDN4 (1-209aa) was expressed with the C-terminal 10xHis tag. The activity was validated.
In addition, this recombinant human CLDN4 protein was developed through the Virus-Like Particles (VLPs) Platform. It is a four-pass transmembrane protein.

Both CLDN4 and CLDN8 are considered to be cation barriers and anion channels. We found that catheter-specific knockout of CLDN4 caused hypotension, hypochloremia, metabolic alkalosis, and renal failure symptoms of Na^+ and Cl^-, and overexpression of CLDN4 resulted in cation-selective MDCK II and anion-selective LLC-PK1 TER was increased in cells, and a decrease in Na^+ permeability was observed in MDCK II cells.
In diabetes, CLDN4 is overexpressed in the distal nephron of type 1 diabetic rats mediated by divergent aldosterone levels, and the expression of WNK4 and its colocalization with CLDN4 and CLDN8 are also increased. This may lead to increased activation of CLDN4 and CLDN8 by WNK4 under diabetic conditions.

Endotoxin

Less than 1.0 EU/ug as determined by LAL method.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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of lyophilized form is 12 months at -20°C/-80°C.