

Synonym

CLDN9

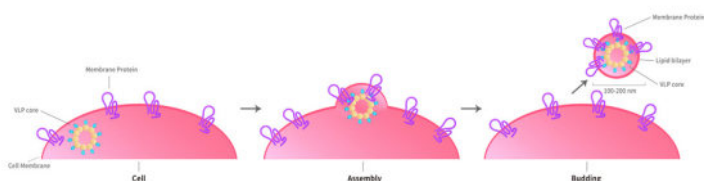
Source

Human Claudin-9 Full Length Protein-VLP(CL9-H52P5) is expressed from human 293 cells (HEK293). It contains AA Met 1 -Val 217 (Accession # [O95484-1](#)).

Predicted N-terminus: Met 1

Molecular Characterization

Virus-like particles(VLPs) are formed by self-assembly of envelop/capsid proteins from viruses. Membrane Proteins can be constituted in-situ with VLPs produced from HEK293 cell cultures. These VLPs concentrate conformationally intact membrane proteins directly on the cell surface and produce soluble, high-concentration proteins perfect for immunization and antibody screening.



The VLPs provide the display of properly folded membrane proteins in their native cellular membrane in a compact size of 100~300 nm diameter (similar to the size of most viruses) making it optimal targets for dendritic cells in vivo and surface attachment for phage display.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Formulation

The VLPs are highly immunogenic, so the immunization strategy should be optimized (antigen dose, regimen and adjuvant).

Supplied as 0.2 µm filtered solution in PBS, Arginine, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped as sterile liquid solution with dry ice, please inquire the shipping cost.

Storage

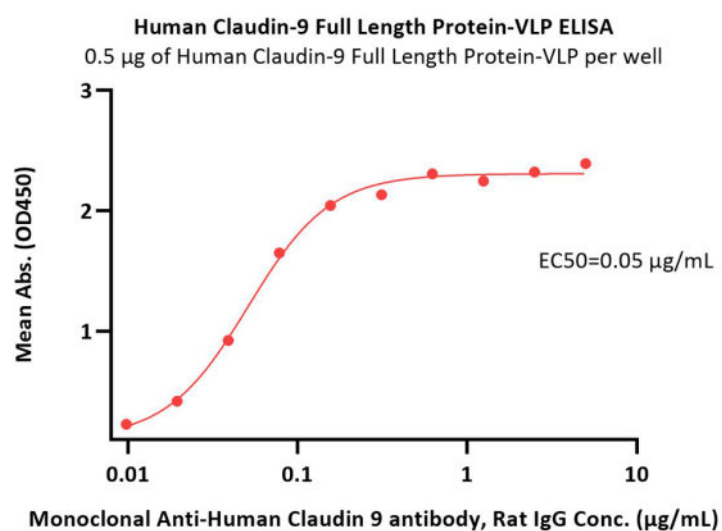
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

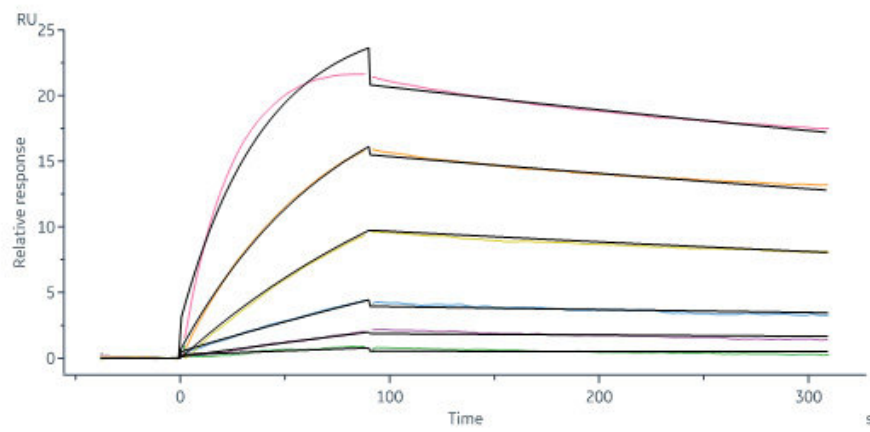
*The isotype control of empty/mock VLP (Cat. No. [VLP-N5213](#)) is sold separately and not included in protein, you can follow [this link](#) for product information.

Bioactivity-ELISA



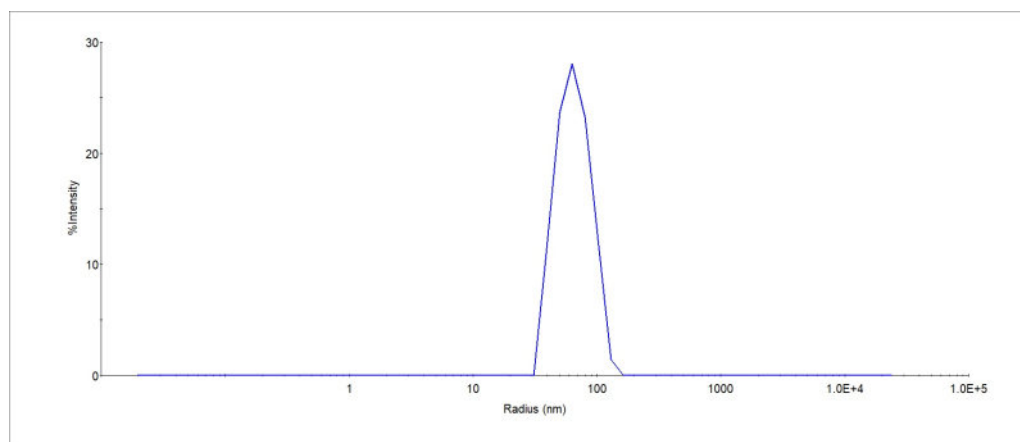
Immobilized Human Claudin-9 Full Length Protein-VLP (Cat. No. CL9-H52P5) at 5 µg/mL (100 µL/well) can bind Monoclonal Anti-Human Claudin 9 antibody, Rat IgG with a linear range of 0.01-0.156 µg/mL (QC tested).

Bioactivity-SPR



Human Claudin-9 Full Length Protein-VLP (Cat. No. CL9-H52P5) captured on L1 Chip can bind Anti-Claudin 9 antibody [YD4E9] with an affinity constant of 3.61 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Identity-DLS



The mean peak Radius of VLP is 55-75 nm with more than 95% intensity as determined by dynamic light scattering (DLS).

Background

Claudin-9 belongs to the claudin family. Claudins constitute integral membrane proteins responsible for solute and electrolyte permeability of the tight junction that serve as a physical barrier to prevent solutes and water from passing freely through the paracellular space between epithelial or endothelial cell sheets. Tight junctions also play a critical role in maintaining cell polarity and signal transductions. Claudin-9 creates charge specific channels in the paracellular space, plays a major role in tight junction-specific obliteration of the intercellular space, through calcium-independent cell-adhesion activity, is required to preserve sensory cells in the hearing organ because claudin-9-defective tight junctions fail to shield the basolateral side of hair cells from the K⁺-rich endolymph. Its ion barrier function is essential in the cochlea, but appears to be dispensable in other organs. Is one of the entry cofactors for hepatitis C virus; it enables HCV entry into target cells just as efficiently as CLDN1.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.