Datasheet for ABIN7448162
Claudin 6 Protein-VLP (CLDN6)

Overview

<table>
<thead>
<tr>
<th>Quantity:</th>
<th>100 μg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target:</td>
<td>Claudin 6 (CLDN6)</td>
</tr>
<tr>
<td>Origin:</td>
<td>Human</td>
</tr>
<tr>
<td>Source:</td>
<td>HEK-293 Cells</td>
</tr>
<tr>
<td>Protein Type:</td>
<td>VLP</td>
</tr>
<tr>
<td>Biological Activity:</td>
<td>Active</td>
</tr>
<tr>
<td>Application:</td>
<td>ELISA, Immunogen (Imm), Functional Studies (Func), Surface Plasmon Resonance (SPR)</td>
</tr>
</tbody>
</table>

Product Details

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>Human Claudin 6 Protein-VLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence:</td>
<td>Met1-Val220</td>
</tr>
<tr>
<td>Characteristics:</td>
<td>Recombinant Full length Human Claudin 6 Protein-VLP is expressed from Expi293. It contains Met1-Val220.</td>
</tr>
<tr>
<td>Purity:</td>
<td>&gt; 95 % as determined by HPLC.</td>
</tr>
<tr>
<td>Sterility:</td>
<td>0.22 μm filtered</td>
</tr>
<tr>
<td>Endotoxin Level:</td>
<td>Less than 1EU per μg by the LAL method.</td>
</tr>
<tr>
<td>Biological Activity Comment:</td>
<td>Immobilized Human Claudin 6 VLP at 5μg/ml (100μl/Well). Dose response curve for Anti-Claudin 6 Antibody, mFc Tag with the EC50 of 5.6ng/ml determined by ELISA (QC Test). The affinity constant of 0.36 nM as determined in SPR assay (Biacore T200).</td>
</tr>
</tbody>
</table>
Target Details

Target: Claudin 6 (CLDN6)

Alternative Name: Claudin 6 (CLDN6 Products)

Background: Claudin-6, Skullin, CLDN6, Claudin6, Skullin 2,
Claudin-6 is a multipass transmembrane protein in the Claudin family. Claudin-6 is expressed by epithelial cells where it participates in tissue development and the maintenance of tight junction integrity. Human Claudin-6 shares 88% and 86% amino acid sequence identity with mouse and rat Claudin-6, respectively.

Molecular Weight: 24.5 kDa.

UniProt: P56747

Pathways: Hepatitis C

Application Details

Application Notes: • Antibody Discovery: Immunization, Screening, Functional Characterization
• Affinity determination: ELISA, SPR
• In vivo pharmacokinetic analysis
• CMC method development
• CAR-T Positive Rate Detection
• Blood sample determination: ELISA

Comment: Virus-like particles (VLPs) are formed from the outer capsid protein of a virus and are tiny nanoparticles formed by the automatic assembly of one or more capsid proteins. VLPs do not contain viral infectious genomes, so they are relatively safe during production operations. The SAMS™ protein engineering platform has been used to express a series of biotinylated, non-biotinylated, and fluorescently-labeled VLP-displayed antigens. They are suitable for SPR, ELISA, CAR-T positive rate detection, and other experimental scenarios.

Virus-Like Particles (VLPs) are highly immunogenic, meaning that they can elicit a strong immune response in the host. VLPs are recognized by the immune system and are taken up by antigen-presenting cells (APCs) such as dendritic cells. Once taken up by APCs, VLPs are processed and presented to T cells, which can trigger the activation of B cells to produce antibodies against the displayed antigen. Because VLPs resemble the structure and composition of native viruses, they are highly effective at inducing both humoral and cellular immune responses.

Generally, VLPs range in size from approximately 20 to 200 nanometers (nm). Compared to a
Application Details

cell-based immunization approach, their smaller size can optimize the immune response to target the specific antigen displayed on the surface of the engineered VLPs.

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Centrifuge tubes before opening. Reconstituting to a concentration more than 100 μg/mL is recommended. Dissolve the lyophilized protein in distilled water.

Buffer: Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8 % trehalose is added as protectant before lyophilization.

Storage: 4 °C,-80 °C

Storage Comment: Reconstituted protein stable at -80°C for 12 months, 4°C for 1 week. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

Expiry Date: 12 months

Images

Size-exclusion chromatography

Image 1. The purity of Human Claudin 6 VLP is greater than 95 % as determined by SEC-HPLC.
**Surface Plasmon Resonance**

**Image 2.** Human Claudin 6 VLP immobilized on CM5 Chip can bind Anti-Claudin 6 Antibody with an affinity constant of 0.36 nM as determined in SPR assay (Biacore T200).

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**ELISA**

**Image 3.** Immobilized Human Claudin 6 VLP at 5 μg/mL (100 μL/Well). Dose response curve for Anti-Claudin 6 Antibody, mFc Tag with the EC50 of 5.6 ng/mL determined by ELISA (QC Test).