Fluorescent Human GPRC5D Full Length Protein (VLP)

Catalog # GPD-HF2P7

Application

- Immunization
- Cell based assay (FACS or functional assay)
- Screening (ELISA)

Synonym

GPRC5D, G-protein coupled receptor family C group 5 member D

Source

Fluorescent Human GPRC5D Full Length Protein-VLP (GPD-HF2P7) is expressed from human 293 cells (HEK293). It contains AA Tyr 2 - Cys 300 (Accession # Q9NZD1-2).

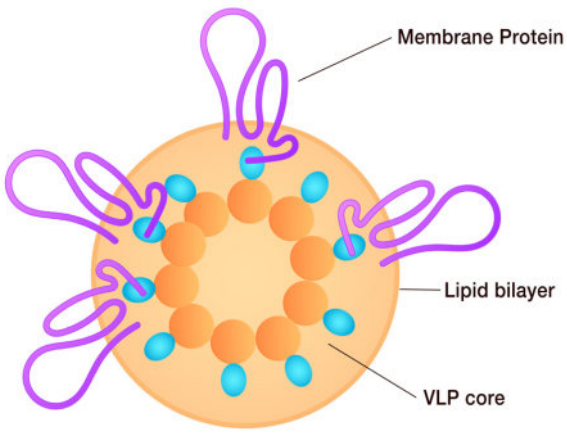
Predicted N-terminus: Met

Molecular Characterization

This protein carries a GFP tag.

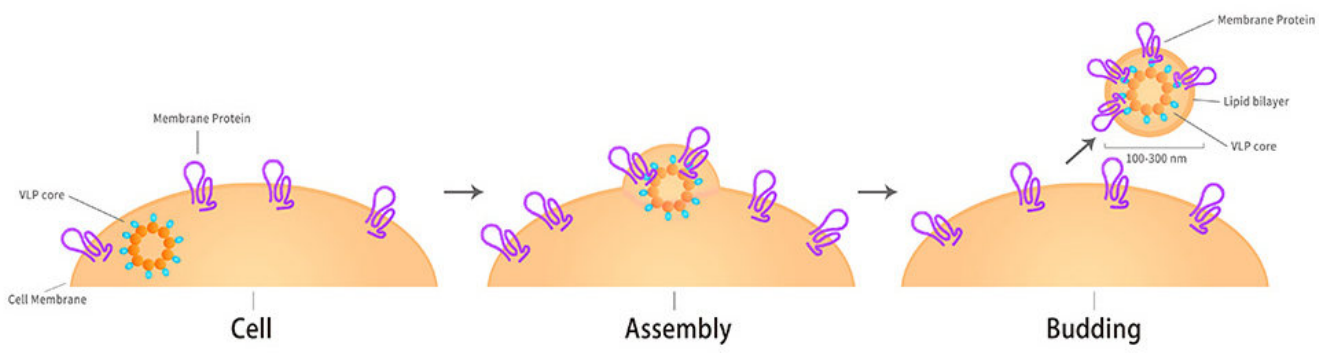
*The isotype control of empty/mock VLP (Cat. No. VLP-NF2P4) is sold separately and not included in protein, you can follow the link for product information.

- **Structure**



Virus-like particles (VLPs) are protein particles that mimic the shape of viruses but lack a viral genome, and incorporating transmembrane proteins on the external surface.

- **Synthesis Process**



Envelope virus-like particles (eVLPs) are produced by **co-expressing target membrane proteins with viral structural proteins in mammalian cells**, enabling native embedding of membrane proteins into the lipid bilayer during VLP budding. This approach preserves authentic conformation, post-translational modifications, and orientation, while creating a completely detergent-free environment with repetitive multivalent display and **strong immunogenicity** making them ideal for immunization, binding assays in antibody discovery and screening (ELISA), and cell-based assays such as FACS, etc.

Conjugate

GFP

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 530 nm

Purity

>95% as determined by SEC-HPLC.

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, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

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

Storage

Please protect from light and avoid repeated freeze-thaw cycles.

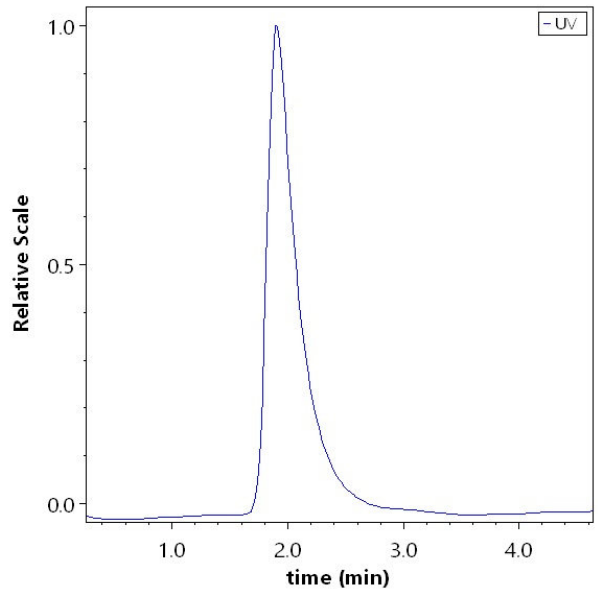
This product is stable after storage at:

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

ACRO Quality Management System

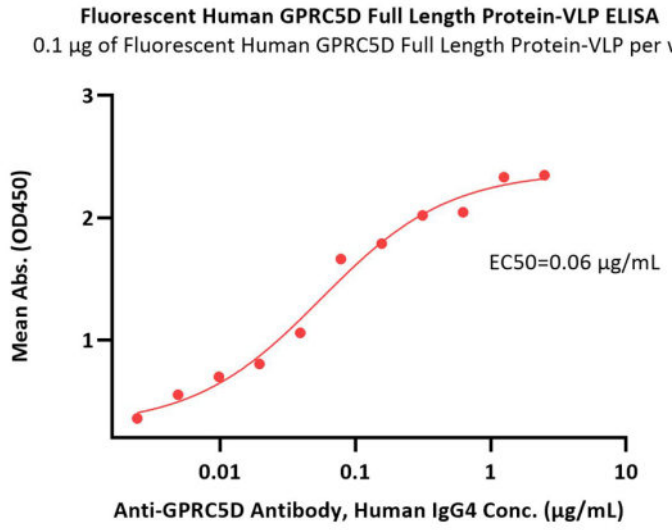
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SEC-HPLC



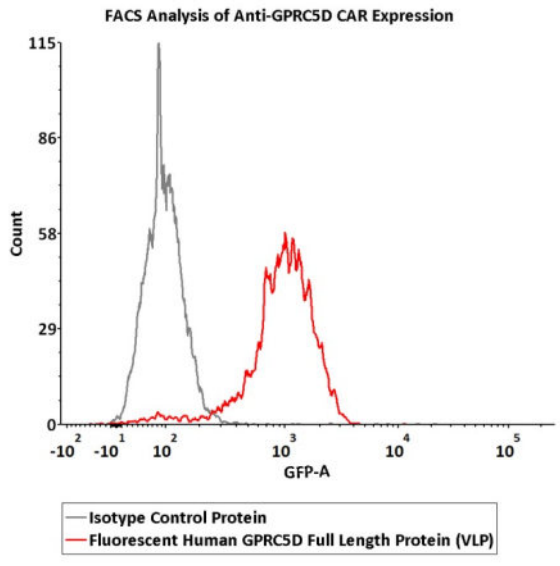
The purity of Fluorescent Human GPRC5D Full Length Protein-VLP (Cat. No. GPD-HF2P7) was greater than 95% as determined by SEC-HPLC.

Bioactivity-ELISA



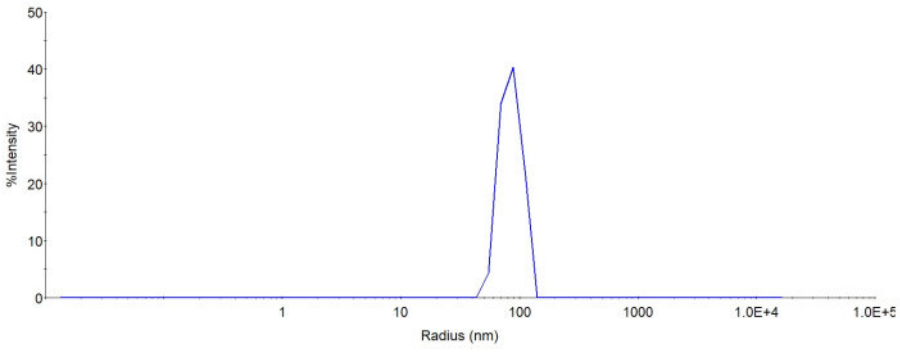
Immobilized Fluorescent Human GPRC5D Full Length Protein-VLP (Cat. No. GPD-HF2P7) at 1 μg/mL (100 μL/well) can bind Anti-GPRC5D Antibody, Human IgG4 with a linear range of 0.002-0.313 μg/mL (QC tested).

Bioactivity-FACS



2e5 of Anti-GPRC5D CAR-293 Cells were stained with 100 μL of 10 μg/mL of Fluorescent Human GPRC5D Full Length Protein (VLP) (Cat. No. GPD-HF2P7) and isotype control protein respectively. GFP signal was used to evaluate the binding activity (QC tested).

Identity-DLS



The mean peak Radius of VLP is 65-85 nm with more than 95% intensity as determined by dynamic light scattering (DLS).

Background

An orphan G protein-coupled receptor with highly restricted expression in malignant plasma cells and hard keratinized tissues (hair/nail). This profile mitigates off-tumor toxicity, establishing GPRC5D as a breakthrough target for bispecific antibodies and CAR-T therapies in relapsed/refractory multiple myeloma.