Datasheet for ABIN7448170

GPRC5D Protein-VLP (AA 1-345) (Biotin)

2 Images

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Overview

Quantity:	100 µL
Target:	GPRC5D
Protein Characteristics:	AA 1-345
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	VLP
Biological Activity:	Active
Purification tag / Conjugate:	This GPRC5D protein is labelled with Biotin.
Application:	ELISA, Functional Studies (Func), Immunogen (Imm), Surface Plasmon Resonance (SPR)

Product Details

Purpose:	Biotinylated Human GPRC5D Protein-VLP
Sequence:	Met1-Val345
Characteristics:	Recombinant Biotinylated Human GPRC5D Protein-VLP is expressed from HEK293.It contains Met1-Val345.
Purity:	> 95 % as determined by HPLC
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1EU per µg by the LAL method.
Biological Activity Comment:	The affinity constant of 0.30 nM as determined in SPR assay (Biacore T200).

Target Details

Target:	GPRC5D
Alternative Name:	GPRC5D (GPRC5D Products)
Background:	Chimeric antigen receptor (CAR) T cells, a type of cell-based immunotherapy, have shown some promising results in multiple myeloma, a bone marrow cancer.The orphan G protein-coupled receptor, class C group 5 member D (GPRC5D), normally expressed only in the hair follicle, Using quantitative immunofluorescence, we determined that GPRC5D protein is expressed on CD138 MM cells from primary marrow samples with a distribution that was similar to, but independent of, BCMA.
Molecular Weight:	39.6 kDa.

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 cell-based immunization approach, their smaller size can optimize the immune response to

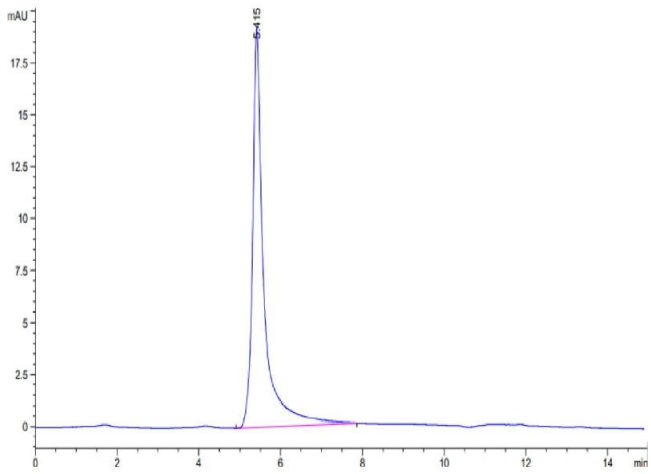
Application Details

	target the specific antigen displayed on the surface of the engineered VLPs.
Restrictions:	For Research Use only

Handling

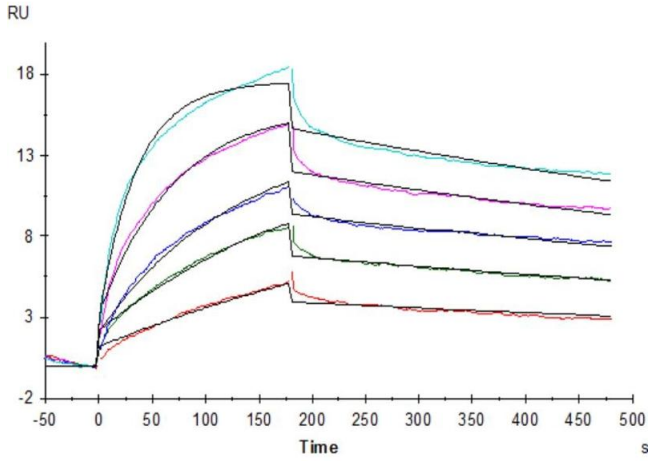
Format:	Liquid
Buffer:	Supplied as 0.22μm filtered solution in PBS (pH 7.4).
Storage:	-80 °C
Storage Comment:	Valid for 12 months from date of receipt when stored at -80°C., Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Expiry Date:	12 months

Images



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 1. The purity of Biotinylated Human GPRC5D VLP is greater than 95 % as determined by SEC-HPLC.



Surface Plasmon Resonance

Image 2. Biotinylated Human GPRC5D VLP captured on SA Chip can bind Anti-GPRC5D antibody, hFc with an affinity constant of 0.30 nM as determined in SPR assay (Biacore T200).