

Datasheet for ABIN7448154

**CCR2 Protein-VLP (AA 1-360) (Biotin)**[Go to Product page](#)**2** Images

## Overview

Quantity:	100 µL
Target:	CCR2
Protein Characteristics:	AA 1-360
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	VLP
Biological Activity:	Active
Purification tag / Conjugate:	This CCR2 protein is labelled with Biotin.
Application:	ELISA, Immunogen (Imm), Functional Studies (Func), Surface Plasmon Resonance (SPR)

## Product Details

Purpose:	Biotinylated Human CCR2b Protein-VLP
Sequence:	Met1-Leu360
Characteristics:	Recombinant Biotinylated Human CCR2b Protein-VLP is expressed from HEK293. It contains Met1-Leu360.
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 5.24 nM as determined in SPR assay (Biacore T200).

## Target Details

Target:	CCR2
Alternative Name:	CCR2b ( <a href="#">CCR2 Products</a> )
Background:	The chemokine (C-C motif) receptor 2B (CCR2B) is one of the two isoforms of the receptor for monocyte chemoattractant protein-1 (CCL2), the major chemoattractant for monocytes, involved in an array of chronic inflammatory diseases. The actin-binding protein filamin A (FLNa) as a protein that associates with the carboxyl-terminal tail of CCR2B. FLNa emerges as an important protein for controlling the internalization and spatial localization of the CCR2B receptor in different dynamic membrane structures.
Molecular Weight:	42.9kDa.
Pathways:	<a href="#">cAMP Metabolic Process</a> , <a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Positive Regulation of Immune Effector Process</a>

## Application Details

Application Notes:	<ul style="list-style-type: none"><li>• Antibody Discovery: Immunization, Screening, Functional Characterization</li><li>• Affinity determination: ELISA, SPR</li><li>• In vivo pharmacokinetic analysis</li><li>• CMC method development</li><li>• CAR-T Positive Rate Detection</li><li>• Blood sample determination: ELISA</li></ul>
Comment:	<p>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.</p> <p>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.</p>

## Application Details

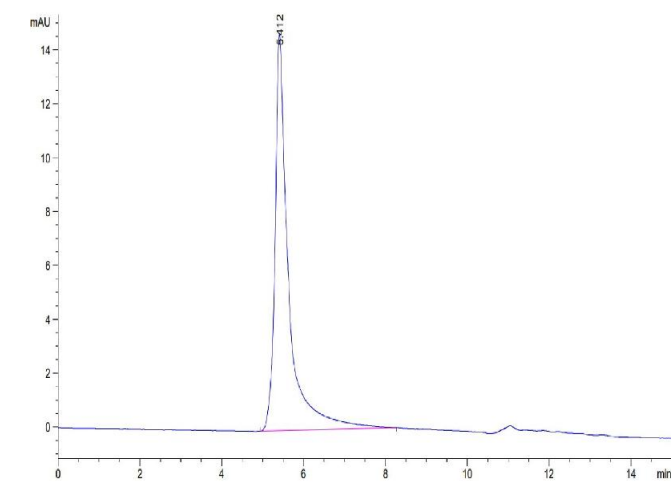
Generally, VLPs range in size from approximately 20 to 200 nanometers (nm). Compared to a cell-based immunization approach, their smaller size can optimize the immune response to target the specific antigen displayed on the surface of the engineered VLPs.

Restrictions: For Research Use only

## Handling

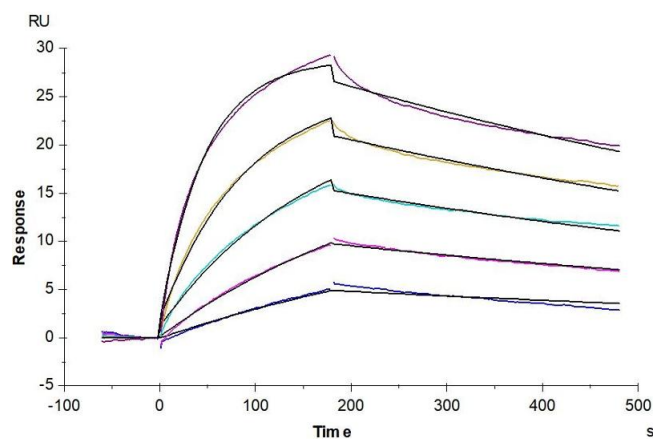
Format:	Liquid
Buffer:	Supplied as 0.22µm filtered solution in PBS ( pH 7.4).
Storage:	-80 °C
Storage Comment:	Valid for 12 months from date of receipt when stored at -80°C., Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Expiry Date: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

## Images



### Size-exclusion chromatography-High Pressure Liquid Chromatography

**Image 1.** The purity of Biotinylated Human CCR2b VLP is greater than 95 % as determined by SEC-HPLC.



### Surface Plasmon Resonance

**Image 2.** Biotinylated Human CCR2b VLP captured on SA Chip can bind Anti-CCR2b Antibody with an affinity constant of 5.24 nM as determined in SPR assay (Biacore T200).