

Datasheet for ABIN7448157  
**CD20 Protein-VLP (AA 1-297) (Biotin)**



[Go to Product page](#)

3 Images

## Overview

Quantity:	100 µL
Target:	CD20 (MS4A1)
Protein Characteristics:	AA 1-297
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	VLP
Biological Activity:	Active
Purification tag / Conjugate:	This CD20 protein is labelled with Biotin.
Application:	Immunogen (Imm), ELISA, Functional Studies (Func), Surface Plasmon Resonance (SPR)

## Product Details

Purpose:	Biotinylated Human CD20 Protein-VLP
Sequence:	Met1-Pro297
Characteristics:	Recombinant Biotinylated Human CD20 Protein-VLP is expressed from HEK293. It contains Met1-Pro297.
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 0.68 nM as determined in SPR assay (Biacore T200).

## Target Details

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Target: CD20 (MS4A1)

Alternative Name: CD20 ([MS4A1 Products](#))

Background: B-lymphocyte antigen CD20 or CD20 is an activated-glycosylated phosphoprotein expressed on the surface of all B-cells beginning at the pro-B phase (CD45R , CD117) and progressively increasing in concentration until maturity. CD20 is the target of the monoclonal antibodies rituximab, ocrelizumab, obinutuzumab, ofatumumab, ibritumomab tiuxetan, tositumomab, and ublituximab, which are all active agents in the treatment of all B cell lymphomas, leukemias, and B cell-mediated autoimmune diseases.

Molecular Weight: 34.3 kDa.

## Application Details

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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

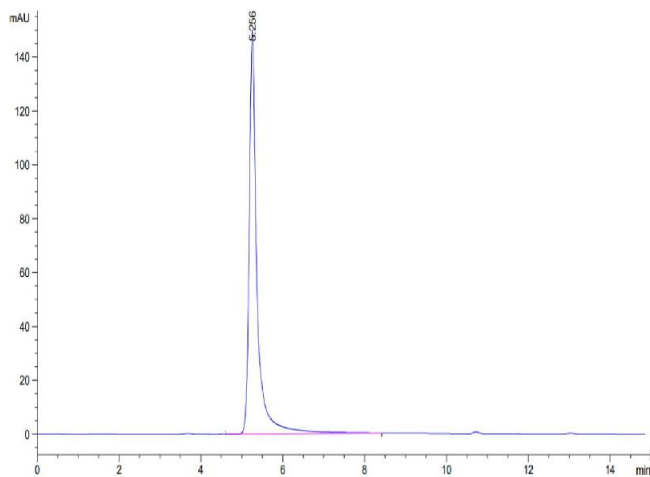
Buffer: Supplied as 0.22µm filtered solution in PBS ( pH 7.4).

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.

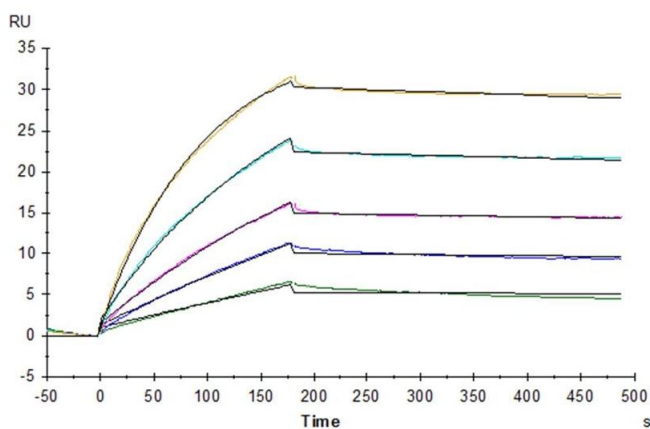
Expiry Date: 12 months

## Images



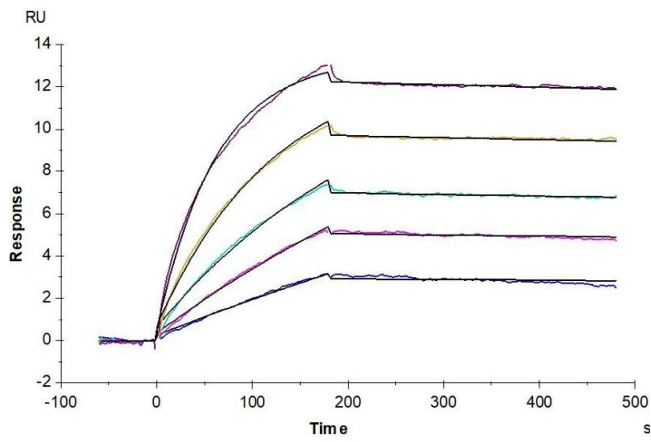
### Size-exclusion chromatography-High Pressure Liquid Chromatography

**Image 1.** The purity of Biotinylated Human CD20 VLP is greater than 95 % as determined by SEC-HPLC.



### Surface Plasmon Resonance

**Image 2.** Biotinylated Human CD20 VLP, captured on CM5 Chip via streptavidin can bind Rituximab, hFc Tag with an affinity constant of 0.68 nM as determined in SPR assay (Biacore T200) (QC Test).



### Surface Plasmon Resonance

**Image 3.** Biotinylated Human CD20 VLP captured on CM5 Chip via streptavidin can bind Ofatumumab, hFc Tag with an affinity constant of 0.61 nM as determined in SPR assay (Biacore T200).