



## Synonym

MS4A1,CD20,MS4A-1

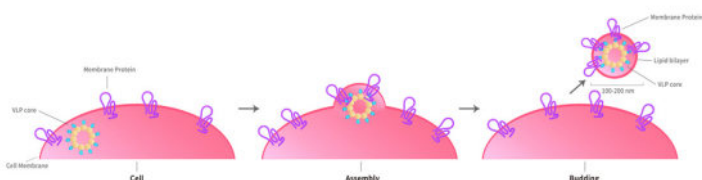
## Source

Human CD20 Full Length Protein-VLP(CDP-H52P6) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Pro 297 (Accession # [P11836-1](#)).

Predicted N-terminus: Met

## Molecular Characterization

Virus-like particles(VLPs) are formed by self-assembly of envelop/capsid proteins from viruses. Membrane Proteins can be constituted in-situ with VLPs produced from HEK293 cell cultures. These VLPs concentrate conformationally intact membrane proteins directly on the cell surface and produce soluble, high-concentration proteins perfect for immunization and antibody screening.



The VLPs provide the display of properly folded membrane proteins in their native cellular membrane in a compact size of 100~300 nm diameter (similar to the size of most viruses) making it optimal targets for dendritic cells in vivo and surface attachment for phage display.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## 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, pH 7.4 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

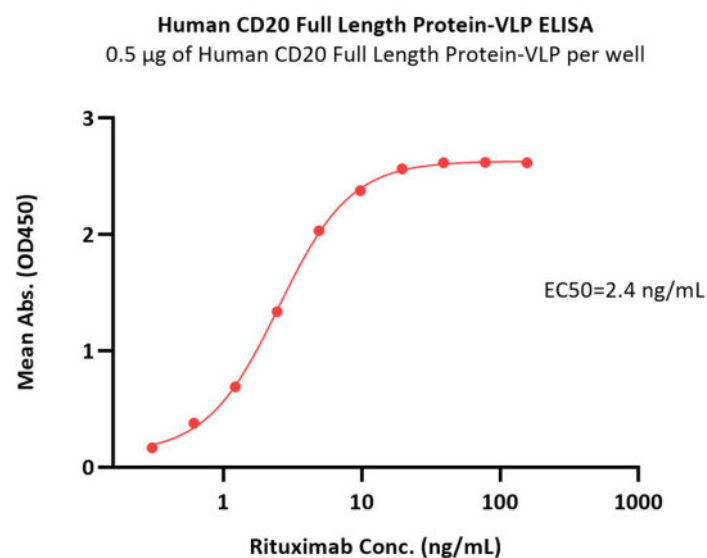
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

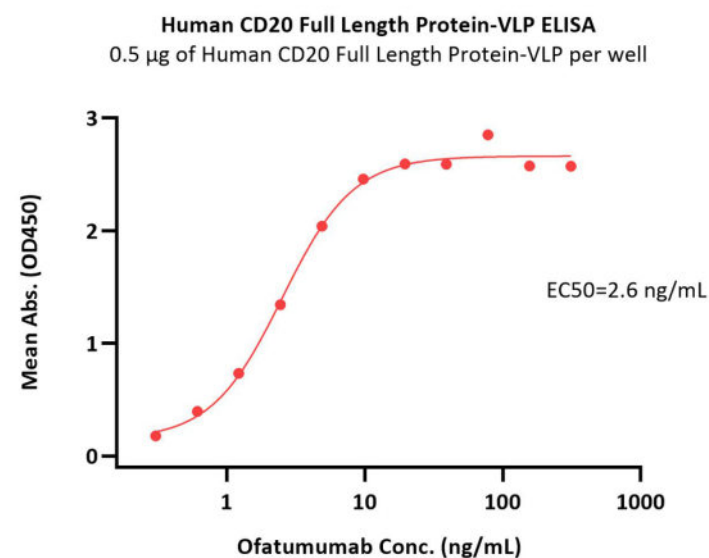
- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

\*The isotype control of empty/mock VLP (Cat. No. [VLP-N5213](#)) is sold separately and not included in protein, you can follow [this link](#) for product information.

## Bioactivity-ELISA



Immobilized Human CD20 Full Length Protein-VLP (Cat. No. CDP-H52P6) at 5 µg/mL (100 µL/well) can bind Rituximab with a linear range of 0.3-5 ng/mL (QC tested).



Immobilized Human CD20 Full Length Protein-VLP (Cat. No. CDP-H52P6) at 5 µg/mL (100 µL/well) can bind Ofatumumab with a linear range of 0.3-5 ng/mL (QC tested).

Discounts, Gifts,  
and more!

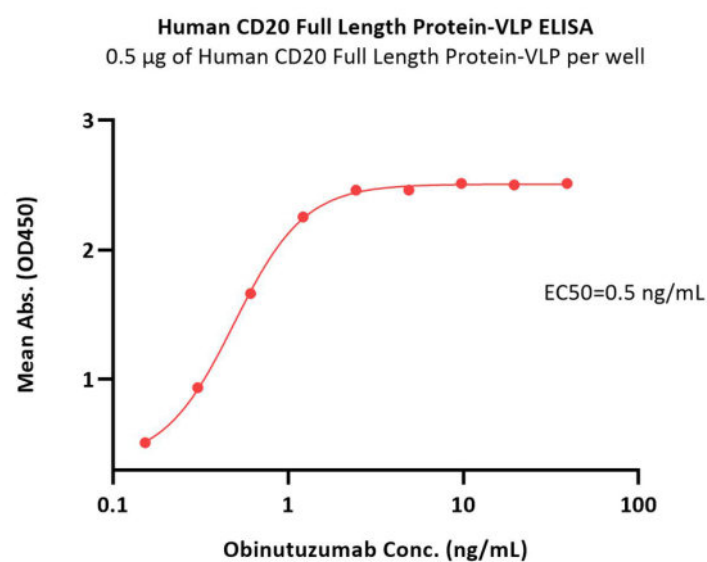


# Human CD20 Full Length Protein (VLP)

Catalog # CDP-H52P6

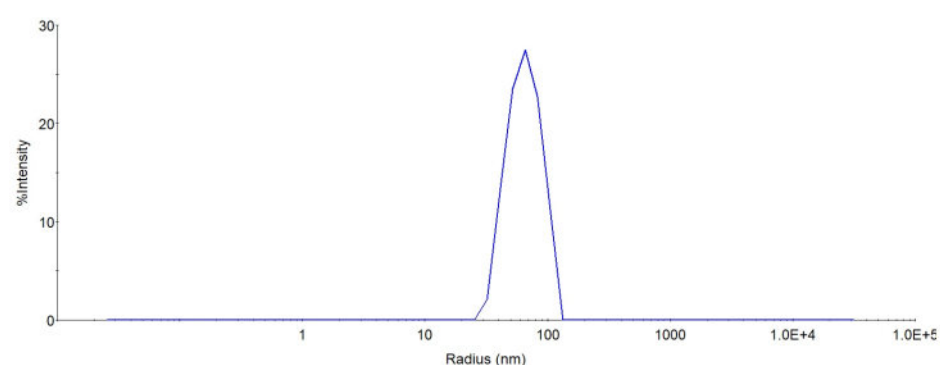


BIOSYSTEMS  
**Acro**



Immobilized Human CD20 Full Length Protein-VLP (Cat. No. CDP-H52P6) at 5 µg/mL (100 µL/well) can bind Obinutuzumab with a linear range of 0.2-1 ng/mL (Routinely tested).

## Identity-DLS



The mean peak Radius of VLP is 60-80 nm with more than 95% intensity as determined by dynamic light scattering (DLS).

## Background

B-lymphocyte antigen CD20 is also known as B-lymphocyte surface antigen B1, Leukocyte surface antigen Leu-16, Membrane-spanning 4-domains subfamily A member 1 and MS4A1, 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 expressed on all stages of B cell development except the first and last; it is present from late pro-B cells through memory cells, but not on either early pro-B cells or plasma blasts and plasma cells. It is found on B-cell lymphomas, hairy cell leukemia, B-cell chronic lymphocytic leukemia, and melanoma cancer stem cells. The protein has no known natural ligand and its function is to enable optimal B-cell immune response, specifically against T-independent antigens. It is suspected that it acts as a calcium channel in the cell membrane. CD20 / MS4A1 is the target of the monoclonal antibodies (mAb) rituximab, Ibritumomab tiuxetan, and tositumomab, which are all active agents in the treatment of all B cell lymphomas and leukemias. Defects in CD20 / MS4A1 are the cause of immunodeficiency common variable type 5 (CVID5); also called antibody deficiency due to CD20 defect. CVID5 is a primary immunodeficiency characterized by antibody deficiency, hypogammaglobulinemia, recurrent bacterial infections and an inability to mount an antibody response to antigen.

## Clinical and Translational Updates

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