



Synonym

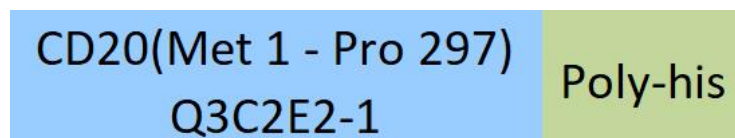
MS4A1, CD20, MS4A-1

Source

Canine CD20 Full Length Protein, His Tag(CD0-C52H9) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Pro 297 (Accession # [Q3C2E2-1](#)).

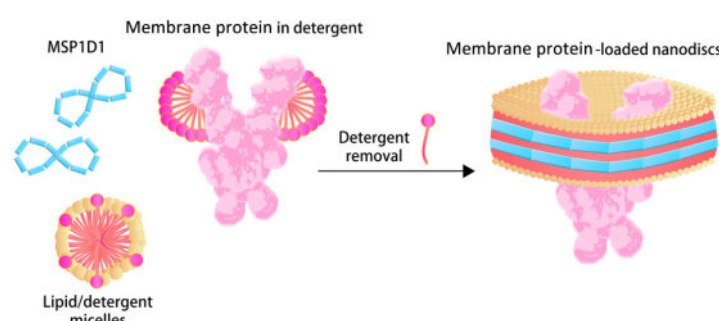
Predicted N-terminus: Met 1

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 35.2 kDa. The protein migrates as 25 kDa and 40 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Nanodiscs are a new class of model membranes that are being used to solubilize and study a range of integral membrane proteins and membrane-associated proteins. The Nanodisc bilayer is bounded by an amphipathic scaffold coat that confers enhanced stability and a narrow particle size distribution.



The nanodisc assembles from a mixture of full length membrane protein in detergent, phospholipid micelles and membrane scaffold protein upon removal of the detergent.

Endotoxin

Less than 1.0 EU per µg by the LAL method / rFC method.

*The isotype control of empty/mock nanodisc (Cat. No. [APO-H51H3](#)) is sold separately and not included in protein, you can follow [this link](#) for product information.

Purity

>80% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 µm filtered solution in 20 mM HEPES, 150 mM NaCl, pH7.5 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.

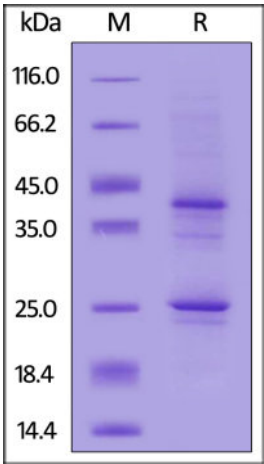
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

SDS-PAGE

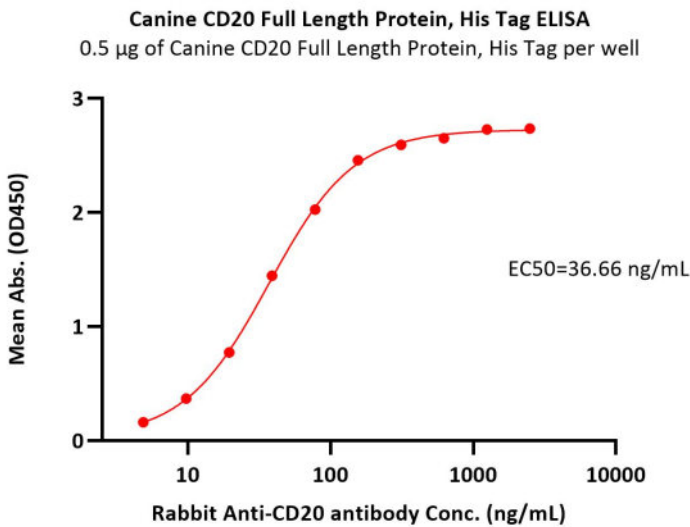
Discounts, Gifts,
and more!





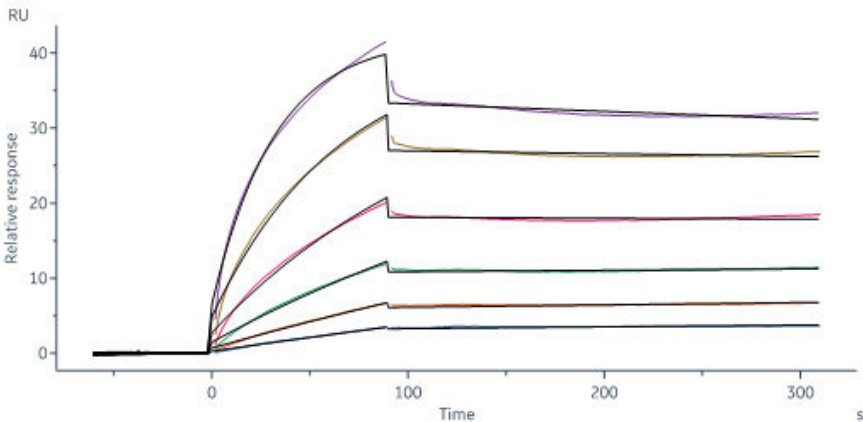
Canine CD20 Full Length Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 80%.

Bioactivity-ELISA



Immobilized Canine CD20 Full Length, His Tag (Nanodisc) (Cat. No. CD0-C52H9) at 5 µg/mL (100 µL/well) can bind Rabbit Anti-CD20 antibody with a linear range of 5-78 ng/mL (QC tested).

Bioactivity-SPR



Rabbit anti-Human CD20 Antibody captured on Protein G Chip can bind Canine CD20 Full Length Protein, His Tag (Cat. No. CD0-C52H9) with an affinity constant of 1.58 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).





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.

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