



## Synonym

MS4A1,CD20,MS4A-1

## Source

FITC-Labeled Cynomolgus CD20 Full Length Protein, His Tag(CD0-CF2H3) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Pro 297 (Accession # [M4ZHZ6-1](#) ).

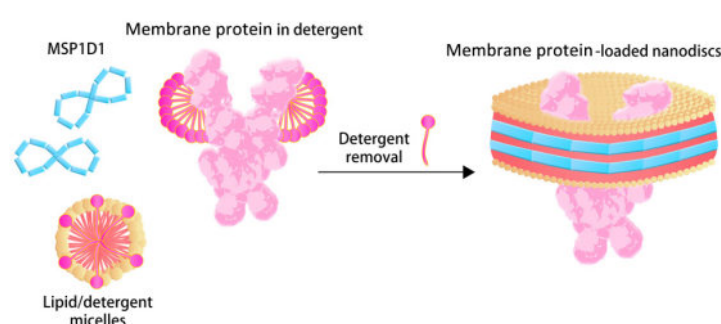
Predicted N-terminus: Met 1

## Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 35.2 kDa.

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 a membrane scaffold protein (MSP1D1) 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(MSP1D1) upon removal of the detergent.

## Conjugate

FITC

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 535 nm

## Labeling

*The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular sieve treatment during purification process.*

## Endotoxin

Less than 1.0 EU per µg by the LAL 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

>85% as determined by SDS-PAGE.

## Formulation

Supplied as 0.2 µm filtered solution in 50 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 protect from light and avoid repeated freeze-thaw cycles.*

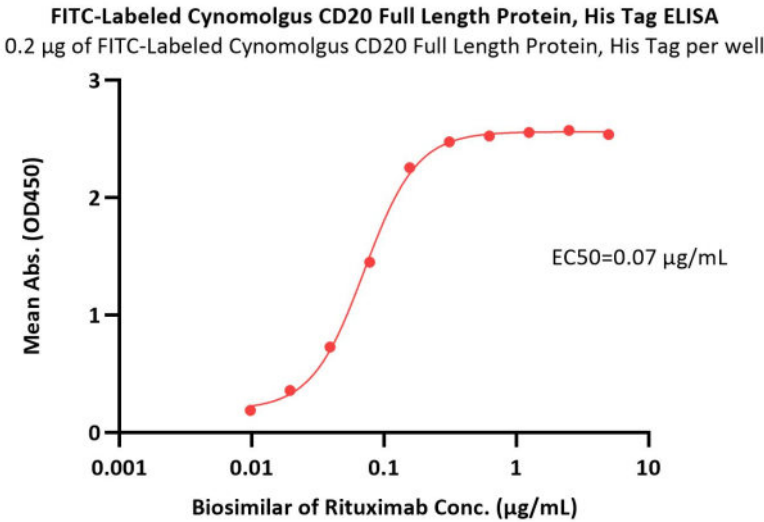
This product is stable after storage at:

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

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Bioactivity-ELISA



Immobilized FITC-Labeled Cynomolgus CD20 Full Length Protein, His Tag (Cat. No. CD0-CF2H3) at 2 µg/mL (100 µL/well) can bind Rituximab biosimilar with a linear range of 0.01-0.156 µg/mL (QC 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.

Clinical and Translational Updates

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