Active Recombinant Human MS4A1 protein, His-tagged

Cat. No. MS4A1-48392H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MS4A1 Protein (Met1-Pro297) is produced by Baculovirus-Insect cells expression system. This protein carries a polyhistidine tag at the C-terminus.
Species	Human
Source	Insect Cells
ProteinLength	Met1-Pro297
Description	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

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	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.
Predicted N Terminal	Met 1
Form	Delivered as bulk protein in a 0.2 μm filtered solution of 50 mM HEPES, 150 mM NaCl, DDM, CHS, pH 7.5 with Glycerol as protectant.
Bio-activity	Immobilized Rituximab at 2 μg/mL (100 μL/well) can bind Human CD20 Full Length, His Tag, insect cell with a linear range of 1-16 ng/mL (in presence of DDM and CHS) (QC tested). Immobilized Human CD20 Full Length, His Tag, insect cell at 2 μg/mL (100 μL/well) on Nickel Coated Plate, can bind Rituximab with a linear range of 0.313-1.25 μg/mL (Routinely tested). Immobilized Ofatumumab (Human IgG1) at 10 μg/mL (100 μL/well) can bind Human CD20 Full Length, His Tag, insect cell with a linear range of 2-31 ng/mL (in presence of DDM and CHS) (Routinely tested).
Molecular Mass	The protein has a calculated MW of 35.2 kDa. The protein migrates as 35-40 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	< 1.0 EU per μg by the LAL method.
Purity	> 80% as determined by SDS-PAGE.
Storage	Please avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: The product MUST be stored at -70 centigrade or lower upon receipt; -70

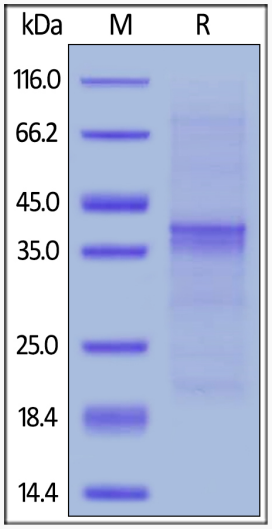
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	centigrade for 3 months under sterile conditions.
Concentration	Contact us for detailes.

GENE INFORMATION

Gene Name	MS4A1 membrane-spanning 4-domains, subfamily A, member 1 [Homo sapiens]
Official Symbol	MS4A1
Synonyms	MS4A1; CD20; B-lymphocyte antigen CD20; B1; Bp35; MS4A2; CD20 antigen; CD20 receptor; S7; CVID5; LEU-16; MGC3969;
Gene ID	931
mRNA Refseq	NM_021950
Protein Refseq	NP_068769
MIM	112210
UniProt ID	P11836

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

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