Recombinant Human MS4A1, Biotin-Fc-tagged

Cat. No. MS4A1-826H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Human CD20(141-184) Protein, With N-Fc tag(Biotinylated CD20) was labeled with biotin based on rhCD20 protein, which was produced in human 293 cells (HEK293)
Species	Human
Source	HEK293
ProteinLength	141-184 a.a.
Description	B-lymphocyte antigen CD20, 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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	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.
Form	Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally Trehalose are added as protectants before lyophilization.
Molecular Mass	32.6 kDa. Protein migrates as 42 kDa in reduced SDS-PAGE due to glycosylation.
Endotoxin	Less than 1.0 EU per μg of the Biotinylated CD20 by the LAL method.
Purity	>95% as determined by reduced SDS-PAGE.
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).
Conjugation	Biotin

GENE INFORMATION

Gene Name	MS4A1 membrane-spanning 4-domains, subfamily A, member 1 [Homo sapiens]
Official Symbol	MS4A1
Synonyms	MS4A1; membrane-spanning 4-domains, subfamily A, member 1; CD20; B-lymphocyte antigen CD20; B1; Bp35; MS4A2; CD20 antigen; CD20 receptor; leukocyte surface antigen Leu-16; B-lymphocyte cell-surface antigen B1; S7; CVID5; LEU-16; MGC3969;

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Gene ID	931
mRNA Refseq	NM_021950
Protein Refseq	NP_068769
MIM	112210
UniProt ID	P11836
Chromosome Location	11q12-q13.1
Pathway	Hematopoietic cell lineage, organism-specific biosystem; Hematopoietic cell lineage, conserved biosystem;
Function	epidermal growth factor receptor binding;

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