Data Sheet (Cat.No.TMPY-04615)

TargetMol

CD20 Protein, Human, Recombinant (TrxA)

General Information

Synonyms:	MS4A2;CD20;CVID5;S7;Bp35;membrane-spanning 4-domains, subfamily A, member 1; MS4A1;B1;LEU-16
Protein Construction:	A DNA sequence encoding the human MS4A1 (NP_068769.2) (Ile141-Ser188) was expressed with a TrxA tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P11836
Molecular Weight:	23.9 kDa (predicted); 28.2 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 80 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 1 mM EDTA, 5% Glycerol, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CD20 (membrane-spanning 4-domains, subfamily A, member 1), also known as MS4A1, is a member of the membrane-spanning 4A gene family. Members of this nascent protein family are characterized by common structural features and similar intron/exon splice boundaries and display unique expression patterns among hematopoietic cells and nonlymphoid tissues. CD20 / MS4A1 is expressed in all stages of B cell development

except the first and last. CD20 / MS4A1 is present from pre-pre B cells through memory cells, but not on either pro-B cells or plasma cells. It is a B-lymphocyte surface molecule that plays a role in the development and differentiation of B-cells into plasma cells. CD20 / MS4A1may be involved in the regulation of B-cell activation and proliferation. Defects in CD20 / MS4A1 are the cause of immunodeficiency common variable type 5(CVID5). CVID5 is a primary immunodeficiency characterized by antibody deficiency, hypogammaglobulinemia, recurrent bacterial infections, and an inability to mount an antibody response to antigen. The defect results from a failure of B-cell differentiation and impaired secretion of immunoglobulins; the numbers of circulating B-cells are usually in the normal range but can be very low.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Tedder TF,et al.(1988) Isolation and structure of a cDNA encoding the B1 (CD20) cell-surface antigen of human B lymphocytes. Proc Natl Acad Sci. 85(1): 208-12

Cragg MS, et al. (2005) The biology of CD20 and its potential as a target for mAb therapy. Curr Dir Autoimmun. 8: 140-74..

Polyak MJ,et al.(2003) A cholesterol-dependent CD20 epitope detected by the FMC7 antibody. Leukemia. 17(7): 1384-9.

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