

Human CD20 / MS4A1 Protein (TrxA Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 11007-H34E

General Information

Gene Name Synonym:

B1; Bp35; CD20; CVID5; LEU-16; MS4A1; MS4A2; S7

Protein Construction:

A DNA sequence encoding the human MS4A1 (NP_068769.2) (Ile141-Ser188) was expressed with a TrxA tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 80 % as determined by SDS-PAGE.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human MS4A1 consists 218 amino acids and predicts a molecular mass of 23.9 kDa.

Formulation:

Lyophilized from sterile 50 mM Tris, 150 mM NaCl, 1 mM EDTA, pH 8.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

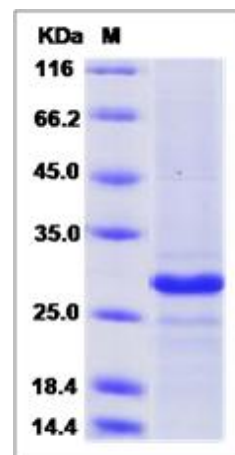
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 on 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 which plays a role in the development and differentiation of B-cells into plasma cells. CD20 / MS4A1 may 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 is usually in the normal range, but can be low.

References

1. 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.
2. Cragg MS, *et al.* (2005) The biology of CD20 and its potential as a target for mAb therapy. *Curr Dir Autoimmun.* 8: 140-74..
3. Polyak MJ, *et al.* (2003) A cholesterol-dependent CD20 epitope detected by the FMC7 antibody. *Leukemia.* 17(7): 1384-9.

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