

# Human CD20 / MS4A1 Protein (aa 213-297, His Tag)

Catalog Number: 11007-H07H2



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

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

### Protein Construction:

A DNA sequence encoding the human CD20 (NP\_068769.2) (Glu213-Pro297) was expressed, with an N-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 83 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per  $\mu$ g of the protein as determined by the LAL method

**Predicted N terminal:** His

### Molecular Mass:

The recombinant human CD20 comprises 104 amino acids and has a predicted molecular mass of 12.1 kDa. The apparent molecular mass of the protein is approximately 23 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

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

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

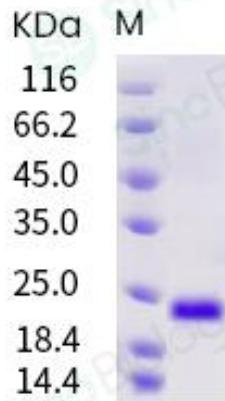
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

### 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 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 / 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 are usually in the normal range but can be very 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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