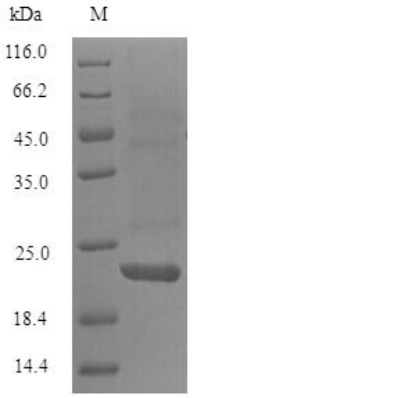
Recombinant Mouse B-lymphocyte antigen CD20 (Ms4a1), partial

Product Code	CSB-YP015007MO2
Relevance	This protein may be involved in the regulation of B-cell activation and proliferation.
Abbreviation	Recombinant Mouse Ms4a1 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P19437
Alias	B-cell differentiation antigen Ly-44Lymphocyte antigen 44Membrane-spanning 4-domains subfamily A member 1; CD20
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	ILNMTLSHFLKMRRLELIQTSKPYVDIYDCEPSNSSEKNSPSTQYCNSIQSVFLG ILSAMLISAFFQKLVTAGIVENEWKRMCTRSKSNVVLLSAGEKNEQTIKMKEEII ELSGVSSQPKNEEEIEIIPVQEEEEEEAEINFPAPPQEQESLPVENEIAP
Research Area	Others
Source	Yeast
Target Names	Ms4a1
Expression Region	132-291aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	20.1kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Mouse B-lymphocyte antigen CD20 (Ms4a1) is produced through a yeast expression system, targeting amino acid residues 132-291. This partial protein comes with an N-terminal 6xHis-tag, which streamlines purification processes. SDS-PAGE analysis confirms purity levels exceeding 90%, suggesting this protein offers dependable quality for research applications. The product is designed exclusively for research purposes and should not be considered for therapeutic applications.

CD20 appears to be a cell surface molecule found mainly on B-lymphocytes. It seems to play an important role in B-cell development and differentiation. Research indicates CD20 may be involved in signal transduction pathways that control cell cycle progression and proliferation. Studies examining CD20 interactions and functions are likely crucial for advancing immunology and hematological research.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Anti-CD20 Antibody Development and Characterization

This recombinant mouse CD20 protein fragment may serve as an antigen for creating antibodies against mouse CD20 in laboratory settings. The N-terminal His-tag appears to simplify purification and allows attachment to different surfaces during immunization protocols or screening assays. Scientists might find this protein useful for developing monoclonal or polyclonal antibodies specific to mouse CD20 for flow cytometry, immunohistochemistry, or Western blot work in murine B-cell studies. The high purity (>90%) suggests minimal contamination that could potentially disrupt antibody specificity.

2. Protein-Protein Interaction Studies

Scientists could use the His-tagged mouse CD20 fragment in pull-down assays to discover possible binding partners or interacting proteins in mouse B-cell

lysates. The His-tag enables straightforward attachment to nickel-based affinity matrices, helping researchers capture proteins that specifically bind to the CD20 extracellular domain. This method might help clarify CD20's function in B-cell signaling pathways and reveal new regulatory mechanisms. The yeast expression system appears to provide appropriate eukaryotic protein folding that may be essential for preserving natural protein interactions.

3. ELISA-Based Binding Assays

Researchers can utilize the recombinant protein as a coating antigen in enzyme-linked immunosorbent assays to examine CD20-specific binding interactions. Scientists might investigate binding kinetics and specificity of current anti-CD20 antibodies or analyze sera from immunized animals. The His-tag enables oriented attachment to nickel-coated plates, which could enhance assay consistency and sensitivity. This application seems particularly useful for screening hybridoma supernatants during antibody development projects focused on mouse CD20.

4. Structural and Biochemical Characterization Studies

This purified CD20 fragment can undergo various biophysical analyses to better understand structural properties of the mouse CD20 extracellular domain. Methods like circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation might provide insights into protein folding, stability, and oligomerization states. The high purity level makes it appropriate for mass spectrometry analysis to verify protein identity and detect post-translational modifications. Such studies could contribute to understanding the molecular foundation of CD20 function in mouse B-cell biology.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.