

Synonym

CD19,B4,CVID3,MGC12802

Source

Biotinylated Human CD19 Protein, Fc Tag, primary amine labeling(CD9-H8259) is expressed from human 293 cells (HEK293). It contains AA Pro 20 - Lys 291 (Accession # [P15391-1](#)).
Predicted N-terminus: Pro 20

Molecular Characterization

CD19(Pro 20 - Lys 291) P15391-1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc fragment at the C-terminus. The protein has a calculated MW of 56.3 kDa. The protein migrates as 66-90 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

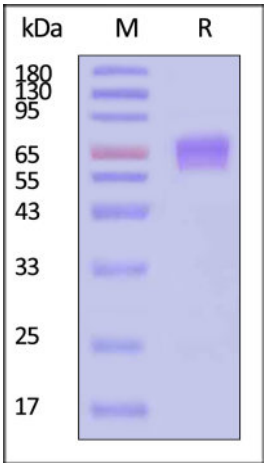
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

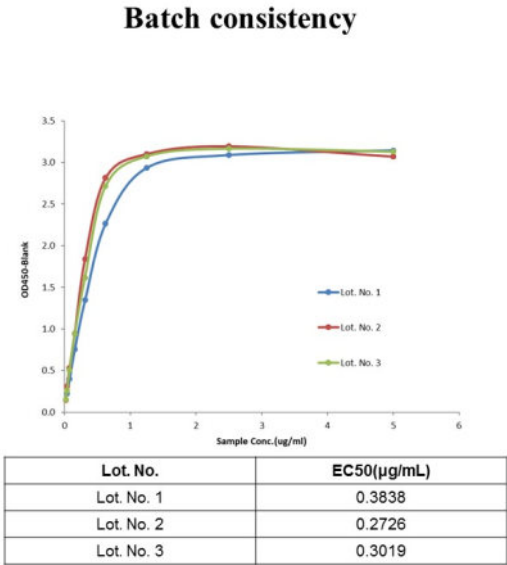
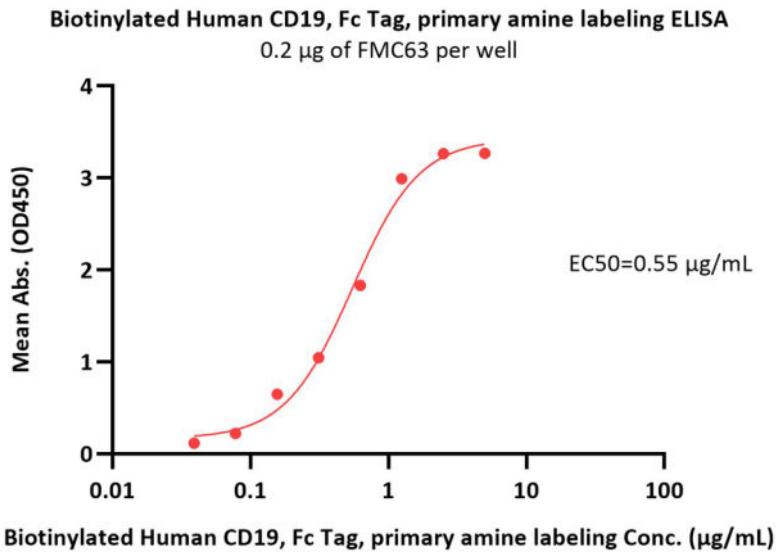
SDS-PAGE



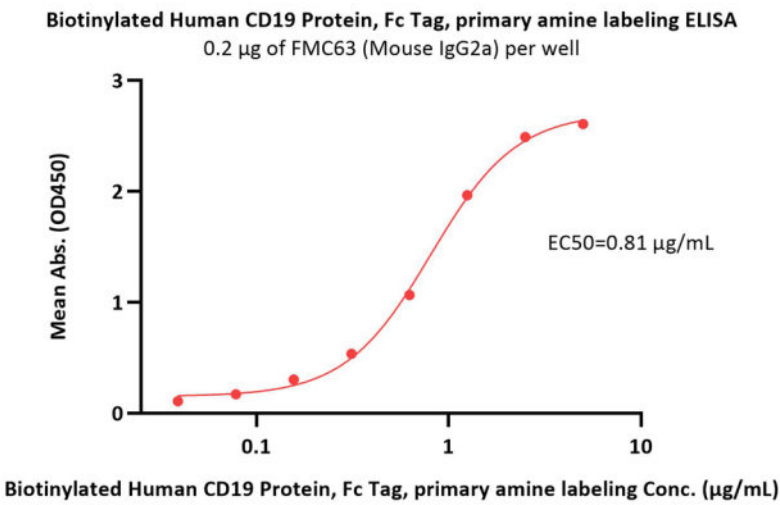
Biotinylated Human CD19 Protein, Fc Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA





Immobilized FMC63 at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD19 Protein, Fc Tag, primary amine labeling (Cat. No. CD9-H8259) with a linear range of 0.039-0.625 µg/mL (QC tested).



Immobilized a series of concentration of Biotinylated Human CD19 Protein, Fc Tag, primary amine labeling (Cat. No. CD9-H8259) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate, can bind FMC63 (Mouse IgG2a) 2 µg/mL (100 µL/well) with a linear range of 0.039-1.25 µg/mL (Routinely tested).

Background

B-lymphocyte antigen CD19 is also known as CD19 (Cluster of Differentiation 19), is a single-pass type I membrane protein which contains two Ig-like C2-type (immunoglobulin-like) domains. CD19 is expressed on follicular dendritic cells and B cells. In fact, it is present on B cells from earliest recognizable B-lineage cells during development to B-cell blasts but is lost on maturation to plasma cells. It primarily acts as a B cell co-receptor in conjunction with CD21 and CD81. Upon activation, the cytoplasmic tail of CD19 becomes phosphorylated, which leads to binding by Src-family kinases and recruitment of PI-3 kinase. As on T cells, several surface molecules form the antigen receptor and form a complex on B lymphocytes. The (almost) B cell-specific CD19 phosphoglycoprotein is one of these molecules. The others are CD21 and CD81. These surface immunoglobulin (sIg)-associated molecules facilitate signal transduction. On living B cells, anti-immunoglobulin antibody mimicking exogenous antigen causes CD19 to bind to sIg and internalize with it. The reverse process has not been demonstrated, suggesting that formation of this receptor complex is antigen-induced. This molecular association has been confirmed by chemical studies. Mutations in CD19 are associated with severe immunodeficiency syndromes characterized by diminished antibody production. CD19 has been shown to interact with: CD81, CD82, Complement receptor 2, and VAV2.

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