

Datasheet for ABIN2180717

**CD19 Protein (AA 20-291) (Fc Tag,Biotin)**[Go to Product page](#)**3** Images**2** Publications

## Overview

Quantity:	200 µg
Target:	CD19
Protein Characteristics:	AA 20-291
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This CD19 protein is labelled with Fc Tag,Biotin.

## Product Details

Brand:	MABSol@,UltraLys
Sequence:	AA 20-291
Specificity:	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.
Characteristics:	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 56-66 kDa on a SDS-PAGE gel under reducing (R) condition due to glycosylation.
Purity:	>95 % as determined by reduced SDS-PAGE.
Sterility:	0.22 µm filtered

## Product Details

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Endotoxin Level: Less than 1.0 EU per µg by the LAL method.

## Target Details

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Target: CD19

Alternative Name: CD19 ([CD19 Products](#))

Background: B-lymphocyte antigen CD19, 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. 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.

Molecular Weight: 56.3 kDa

NCBI Accession: [NP\\_001761](#)

Pathways: [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#)

## Application Details

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Comment: A chemically labeled biotinylated protein with ultra sensitivity.

The product is produced using a chemical labeling approach. The primary amines in the side chains of lysine residues and the N-terminus of protein are conjugated with biotins.

Chemical labeling usually results in multiple biotin attachment on a single protein molecule, which could potentially lead to higher detection sensitivity.

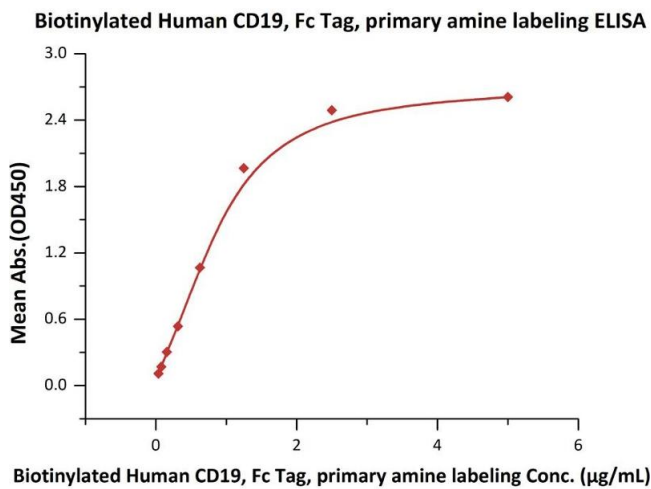
Restrictions: For Research Use only

## Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

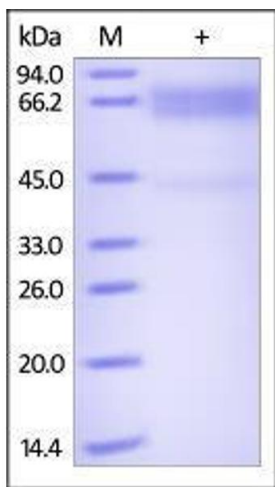
## Publications

- Product cited in:
- Sarkar, Piepenbrink, Basu, Thakar, Keefer, Hessell, Haigwood, Kobie: "IL-33 enhances the kinetics and quality of the antibody response to a DNA and protein-based HIV-1 Env vaccine." in: **Vaccine**, Vol. 37, Issue 17, pp. 2322-2330, (2019) ([PubMed](#)).
- Ouyang, Han, Wang et al.: "Enabling electrical biomolecular detection in high ionic concentrations and enhancement of the detection limit thereof by coupling a nanofluidic crystal with reconfigurable ion concentration ..." in: **Lab on a chip**, Vol. 17, Issue 22, pp. 3772-3784, (2018) ([PubMed](#)).
- Beduleva, Khramova, Menshikov, Stolyarova, Pavlova: "Combined Action of Anti-CD4 Autoantibodies and Rheumatoid Factor in the Development of CD4 Lymphocytopenia in Rats Immunized with HIV-1 gp120." in: **AIDS research and human retroviruses**, Vol. 32, Issue 12, pp. 1173-1179, (2017) ([PubMed](#)).
- Rao, Neogi, Eugenin, Prasad: "The gp120 protein is a second determinant of decreased neurovirulence of Indian HIV-1C isolates compared to southern African HIV-1C isolates." in: **PLoS ONE**, Vol. 9, Issue 9, pp. e107074, (2014) ([PubMed](#)).



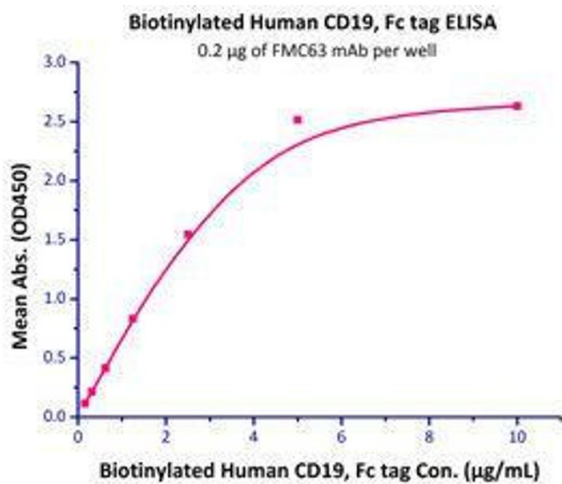
**ELISA**

**Image 1.** Immobilized a series of concentration of Biotinylated Human CD19, Fc Tag, primary amine labeling (ABIN2180718,ABIN2180717) on Streptavidin 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).



**SDS-PAGE**

**Image 2.** Biotinylated Human CD19, Fc tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



**Binding Studies**

**Image 3.** Immobilized FMC63 mAb at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD19, Fc tag (Cat# CD9-H8259) with a linear range of 0.15-2.5 µg/mL.