

Human CD19 (20-291) Protein, Llama IgG2b Fc Tag, low endotoxin

Catalog # CD9-H5250

For Research Use Only

Description

Source Human CD19 (20-291), Llama IgG2b Fc Tag, low endotoxin (CD9-H5250) is expressed from human 293 cells (HEK293). It contains AA Pro 20 - Lys 291 (Accession # P15391-1). Predicted N-terminus: Pro 20

Predicted N-terminus Pro 20

Protein Structure

CD19(Pro 20 - Lys 291) P15391-1	LlamaFc(Glu1 - Ser243) AAX73259.1
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Molecular Characterization This protein carries a llama IgG2b Fc tag at the C-terminus. The protein has a calculated MW of 57.9 kDa. The protein migrates as 70-100 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin Less than 0.01 EU per µg by the LAL method.

Purity >95% as determined by SDS-PAGE.

Bioactivity Measured by its binding ability in a functional ELISA. Immobilized FMC63 MAb at 0.5 µg/mL (100 µL/well) can bind Human CD19 (20-291), Llama IgG2b Fc Tag, low endotoxin (Cat. No. CD9-H5250) with a linear range of 0.313-2.5 µg/mL (QC tested).

Formulation and Storage

Formulation Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

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.

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

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.

References

- (1) Pesando JM, et al., J. Exp. Med. 170 (6): 2159-64.
- (2) van Zelm MC, et al., 2006, N. Engl. J. Med. 354 (18): 1901-12.
- (3) Bradbury LE, et al., 1992, J. Immunol. 149 (9): 2841-50.
- (4) Horváth G, et al., 1998, J. Biol. Chem. 273 (46): 30537-43.
- (5) Imai T, et al., 1995, J. Immunol. 155 (3): 1229-39.
- (6) Doody GM, et al., 2000, EMBO J. 19 (22): 6173-84.

Please contact us at TechSupport@acrobiosystems.com, if you have any questions about this product.

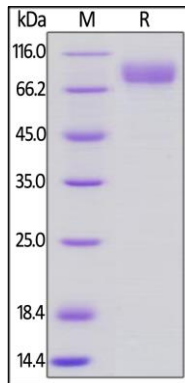
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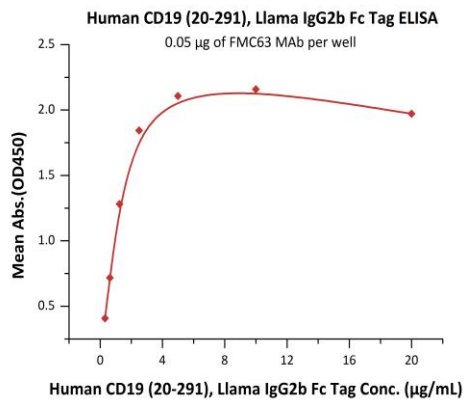
Assay Data

SDS-PAGE Data



Human CD19 (20-291), Llama IgG2b Fc Tag, low endotoxin on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized FMC63 MAb at 0.5 µg/mL (100 µL/well) can bind Human CD19 (20-291), Llama IgG2b Fc Tag, low endotoxin (Cat. No. CD9-H5250) with a linear range of 0.313-2.5 µg/mL (QC tested).

Please note that there may be a cross-reaction between anti-human IgG Fc antibodies and llama IgG Fc tag, also between anti-llama IgG Fc antibodies and human IgG Fc tag.