Active Recombinant Human CD19, Fc tagged

Cat. No. CD19-3308H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CD19 Protein, With C-Fc Tag (rh CD19 Fc Chimera) Pro 20 - Lys 291 (Accession # AAH06338) was produced in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	20-291 a.a.
Description	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

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	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.
Form	Lyophilized from 0.22 μm filtered solution in 50 mM tris, 100 mM glycine, pH7.5. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Bio-activity	Measured by its binding ability in a functional ELISA. Immobilized rhCD9 at 2 μg/mL (100 μL/well) can bind human CD19 Fc Chimera with a linear ranger of 50 - 500 ng/mL, when detected by HRP*-Goat anti Human IgG, Fcγ Fragment.
Molecular Mass	rh CD19 Fc Chimera is fused with a human IgG1 Fc tag at the C-terminus, and has a calculated MW of 56.3 kDa. The predicted N-terminus is Pro 20. DTT-reduced Protein migrates as 56-66 kDa in SDS-PAGE due to glycosylation.
Endotoxin	Less than 1.0 EU per μg of the rh CD19 Fc Chimera by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4ºC); After reconstitution under sterile conditions for 3 months (-70ºC).

GENE INFORMATION

Gene Name	CD19 CD19 molecule [Homo sapiens]
Official Symbol	CD19
Synonyms	CD19; CD19 molecule; CD19 antigen; B-lymphocyte antigen CD19; differentiation antigen CD19; T-cell surface antigen Leu-12; B-lymphocyte surface antigen B4; B4;

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	CVID3; MGC12802;
Gene ID	930
mRNA Refseq	NM_001178098
Protein Refseq	NP_001171569
MIM	107265
UniProt ID	P15391
Chromosome Location	16p11.2
Pathway	Adaptive Immune System, organism-specific biosystem; Antigen Activates B Cell Receptor Leading to Generation of Second Messengers, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; B cell receptor signaling pathway, organism-specific biosystem; B cell receptor signaling pathway, conserved biosystem; BCR signaling pathway, organism-specific biosystem; Hematopoietic cell lineage, organism-specific biosystem;
Function	receptor signaling protein activity;

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