

Active Recombinant Human CD19 protein, Fc/Avi-tagged, Biotinylated

Cat. No. CD19-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD19(Glu21- Lys291) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Glu21- Lys291
Description	CD19 is a 95 kDa transmembrane glycoprotein that plays a central role in B cell activation and humoral immune responses (1, 2). Mature human CD19 consists of a 272 amino acid (aa) extracellular domain (ECD) with two Ig-like domains, a 22 aa transmembrane segment, and a 243 aa cytoplasmic domain (3). Within the ECD, human CD19 shares 57% amino acid sequence identity with mouse and rat CD19. CD19 is expressed throughout B cell development from pre-B cells through mature B cells, and it is commonly used as a B cell lineage marker (1). It is required for the responsiveness of mature B cell to antigen stimulation, germinal center development, and antibody affinity maturation (4, 5). CD19 associates with the B cell antigen receptor (BCR), CD81, CD38, CD21, CD22, and IFITM1/CD225/Leu13, (6-9). These associations enable CD19 to amplify B cell signaling (7, 9-12) and reduce the threshold for antigen stimulation through the BCR (13). CD19 polymorphisms and up-regulation can lead to the development of autoimmunity by promoting autoantibody production (2).

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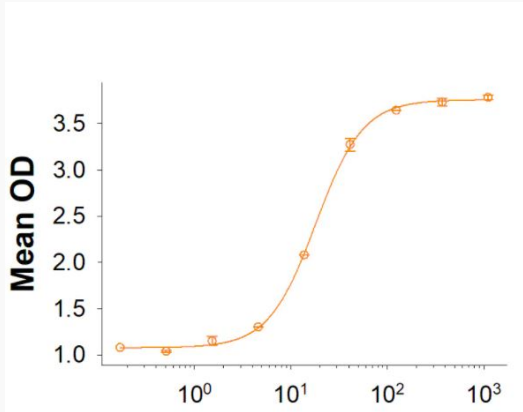
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Predicted N Terminal	Glu21
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Human CD19 Antibody is immobilized at 0.5 µg/mL (100 µL/well), it binds to Biotinylated Recombinant Human CD19 Fc Chimera Avi-tag with an ED50 of 7.5-45 ng/mL.
Molecular Mass	75-95 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.
Conjugation	Biotin
GENE INFORMATION	
Gene Name	CD19 CD19 molecule [Homo sapiens]
Official Symbol	CD19

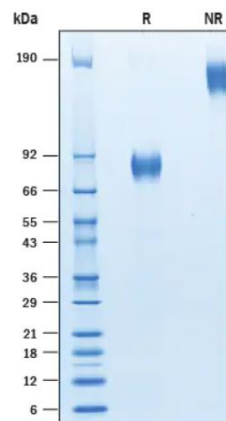
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Synonyms	CD19; CD19 molecule; CD19 antigen; B-lymphocyte antigen CD19; differentiation antigen CD19; T-cell surface antigen Leu-12; B-lymphocyte surface antigen B4; B4; CVID3; MGC12802;										
Gene ID	930										
mRNA Refseq	NM_001178098										
Protein Refseq	NP_001171569										
MIM	107265										
UniProt ID	P15391										
Binding Activity	 <table border="1"> <caption>Approximate data points from the Binding Activity graph</caption> <thead> <tr> <th>Concentration (X-axis)</th> <th>Mean OD (Y-axis)</th> </tr> </thead> <tbody> <tr><td>10⁰</td><td>1.1</td></tr> <tr><td>10¹</td><td>2.1</td></tr> <tr><td>10²</td><td>3.6</td></tr> <tr><td>10³</td><td>3.7</td></tr> </tbody> </table>	Concentration (X-axis)	Mean OD (Y-axis)	10 ⁰	1.1	10 ¹	2.1	10 ²	3.6	10 ³	3.7
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SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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