

# Active Recombinant Human CD19 Protein, Fc-tagged, Alexa Fluor® 488 conjugated

Cat. No. CD19-05H Lot. No. (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant human Alexa Fluor® 488 conjugated CD19 (Glu21-Lys291) protein with a human IgG1 (Pro100-Lys330) Fc tag at C-terminus was expressed in chinese hamster ovary cell line.
<b>Species</b>	Human
<b>Source</b>	CHO
<b>ProteinLength</b>	21-291 a.a.
<b>Description</b>	<p>This gene encodes a member of the immunoglobulin gene superfamily. Expression of this cell surface protein is restricted to B cell lymphocytes. This protein is a reliable marker for pre-B cells but its expression diminishes during terminal B cell differentiation in antibody secreting plasma cells. The protein has two N-terminal extracellular Ig-like domains separated by a non-Ig-like domain, a hydrophobic transmembrane domain, and a large C-terminal cytoplasmic domain. This protein forms a complex with several membrane proteins including complement receptor type 2 (CD21) and tetraspanin (CD81) and this complex reduces the threshold for antigen-initiated B cell activation. Activation of this B-cell antigen receptor complex activates the phosphatidylinositol 3-kinase signalling pathway and the subsequent release of intracellular stores of calcium ions. This protein is a target of chimeric antigen receptor (CAR) T-cells used in the treatment of lymphoblastic leukemia. Mutations in this gene are associated with the disease common variable immunodeficiency 3</p>

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(CVID3) which results in a failure of B-cell differentiation and impaired secretion of immunoglobulins. CVID3 is characterized by hypogammaglobulinemia, an inability to mount an antibody response to antigen, and recurrent bacterial infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

<b>Form</b>	<p>Disulfide-linked homodimer</p> <p>Labeled with Alexa Fluor® 488 via amines</p> <p>Excitation Wavelength: 488 nm</p> <p>Emission Wavelength: 515-545 nm</p>
<b>Bio-activity</b>	<p>Measured by flow cytometry for its ability to bind anti-Human CD19 Monoclonal Antibody conjugated beads. The concentration of Recombinant Human CD19 Fc Chimera Alexa Fluor® 488 that produces 50% of the binding is 0.10-1.50 µg/mL.</p>
<b>Molecular Mass</b>	57 kDa
<b>N-terminal Sequence Analysis</b>	Glu21
<b>Endotoxin</b>	<1.0 EU/µg of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Storage</b>	<p>Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <p>6 months from date of receipt, -20 to -70 centigrade as supplied.</p> <p>1 month, 2 to 8 centigrade under sterile conditions after opening.</p> <p>3 months, -20 to -70 centigrade under sterile conditions after opening.</p>
<b>Storage Buffer</b>	Supplied as a 0.2 µm filtered solution in PBS with BSA as a carrier protein.

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**Shipping** The product is shipped with dry ice or equivalent.

**Conjugation** Alexa Fluor 488

## GENE INFORMATION

**Gene Name** CD19 CD19 molecule [ Homo sapiens (human) ]

**Official Symbol** CD19

**Synonyms** CD19; CD19 molecule; B4; CVID3; B-lymphocyte antigen CD19; B-lymphocyte surface antigen B4; T-cell surface antigen Leu-12; differentiation antigen CD19

**Gene ID** 930

**mRNA Refseq** NM\_001770

**Protein Refseq** NP\_001761

**MIM** 107265

**UniProt ID** P15391

**FC** Streptavidin coated beads conjugated to biotinylated Human CD19 Monoclonal Antibody were stained with the indicated concentrations of Recombinant Human CD19 Fc Chimera Alexa Fluor<sup>®</sup> 488.

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