Active Recombinant Human CD19 Protein, Fc-tagged, Atto 647N conjugated

Cat. No. CD19-08H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Atto 647N conjugated CD19 (Glu21-Lys291) protein with a human IgG1 (Pro100-Lys330) Fc tag at C-terminus was expressed in chinese hamster ovary cell line.
Species	Human
Source	CHO
ProteinLength	21-291 a.a.
Description	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

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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.
Form	Disulfide-linked homodimer Labeled with Atto 647N via amines Excitation Wavelength: 647 nm Emission Wavelength: 667 nm
Bio-activity	Measured by flow cytometry for its ability to bind anti-Human CD19 Monoclonal Antibody conjugated fluorescent beads.
Molecular Mass	57 kDa
N-terminal Sequence Analysis	Glu21
Endotoxin	<1.0 EU/μg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Protect from light. Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after opening. 3 months, -20 to -70 centigrade under sterile conditions after opening.
Storage Buffer	Supplied as a 0.2 μm filtered solution in PBS with BSA as a carrier protein.

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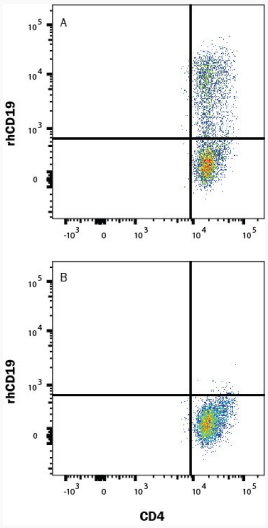
Shipping	The product is shipped with dry ice or equivalent.
Conjugation	Atto 647N

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

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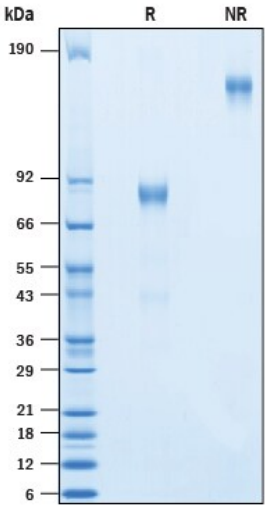
FC



Human PBMC CD4+ and CD8+ T cells were either (A) transduced or (B) not transduced (negative control) with a Human CD19 CAR and then cultured for 11 days. Cells were washed twice with 2 mL 1x PBS then stained with a viability dye for 15-30 min at room temp in the dark. Human block was added during the viability stain to block Fc receptors. Cells were washed twice with Flow Cytometry Staining Buffer then stained with Human CD4 PE-Cy7-conjugated Antibody and rhCD19 Atto 647N-conjugated protein for 25 min at room temp in the dark. Staining was performed using our staining membrane proteins protocol.

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SDS-PAGE



2 μg/lane of Recombinant Human CD19 Fc Chimera Atto 647N was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 77-92 kDa and 154-184 kDa, respectively.

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