

Recombinant Full Length Human CD19 Protein, C-Flag-tagged

Cat. No. CD19-32HFL Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Full Length Human CD19 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.

Species Human

Source Mammalian Cells

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 (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.

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Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Molecular Mass	60.9 kDa
AA Sequence	<p>MPPPRLLFFLLFLTPMEVRPEEPLVVKVEEGDNAVLQCLKGTSDGPTQQLTWSRES PLKPFLKLSLGLPG LGIHMRPLAIWLFIFNVSQQMGGFYLCQPGPPSEKAWQPGWT VNVEGSGELFRWNVSDLGGLGCGLKNRS SEGPPSSPGKLMSPKLYVWAKDRPEI WEGEPPCLPPRDSL NQSL SQDLTMAPGSTLWLSCGVPPDSVSRG PLSWTHVHPK GPKSLLSLELKDDRPARDMWV METGLLLPRATAQDAGKYYCHRG NLTMSFHLEITA RPVL WHWLLRTGGWKV SAVTLAYLIFCLCSLVGILHLQRALVLRKRKRMTDPTRR FFKVTPPPGSGPQNQYGN VLSLPTPTSGLGRAQRWAAGLGGTAPSYGNPSSDVQ ADGALGSRSPPGVGP EEEEEGEGYE EEPDSEEDSEF YENDSNLGQDQLSQDGS GYE NPEDEPLGPEDEDSFSNAESYENEDEELTQP VARTMDFLSPHGS AWDP SR EATSL GSQSYEDMRGILYAAPQLRSIRGQPGPNHEEDADSYENMDNPDGPDP AWGGGGGR MGTWSTRTRTRPLEQKLISEEDLAANDILDYKDDDDKV</p>
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome, Transmembrane

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Protein Pathways B cell receptor signaling pathway, Hematopoietic cell lineage, Primary immunodeficiency

Full Length Full L.

GENE INFORMATION

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

Official Symbol CD19

Synonyms B4; CVID3

Gene ID 930

mRNA Refseq NM_001770.6

Protein Refseq NP_001761.3

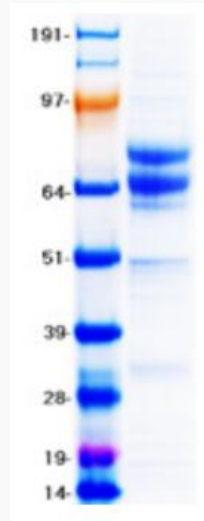
MIM 107265

UniProt ID P15391

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Coomassie blue staining of purified CD19 protein.

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