

Recombinant Human CD19 Protein, Fc-tagged

Cat. No. CD19-130H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human CD19 protein with Fc tag was expressed in HEK293.

Species Human

Source HEK293

ProteinLength 556

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

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splicing results in multiple transcript variants encoding distinct isoforms.

Form Lyophilized

Molecular Mass 56.3 kDa

AA Sequence

MPPRLLFFLLFLTPMEVRPEEPLVVKVEEGDNAVLQCLKGTS DGPTQQLTWSRES
 PLKPFLKLSLGLPGLGIHMRPLAIWLFIFNVSQQMGGFYLCQPGPPSEKAWQPGWT
 VNVEGSGELFRWNVSDLGGLGCGLKNRSSEGPSSPSGKLMSPKLYVWAKDRPEIW
 EGEPCLPPRDSL NQSLSQDLTMAPGSTLWLSCGVPPDSVSRGPLSWTHVHPKGP
 KSLLSLELKDDRPARDMWV METG LLLPRATAQDAGKYYCHRG NLTMSFHLEITARP
 VLWHWLLRTGGWKVSAVTLAYLIFCLCSLVGILHLQRALVLRKRKRMTDPTRRFFK
 VTPPGSGPQNQYGNVLSLPTPTSGLGRAQRWAAGLGGTAPSYGNPSSDVQADG
 ALGSRSPPGVGP EEEEEGEGYE EEPDSEEDSEFYENDSNLGQDQLSQDGSGYENPE
 DEPLGPEDEDSFSNAESYENEDEELTQP VARTMDFLSPHGS AWDP SREATSLGSQ
 SYEDMRGILYAAPQLRSIRGQPGPNHEEDADSYENMDNPDGPDPAWGGGGRMGT
 WSTR

Purity > 98%

Applications WB; ELISA; FACS; FC

Stability This bioreagent is stable at 4 centigrade (short-term) and -70 centigrade(long-term).
 After reconstitution, sample may be stored at 4 centigrade for 2-7 days and below -18
 centigrade for future use.

Storage At -20 centigrade.

Concentration 1 mg/mL

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|-------------------------|--|
| Storage Buffer | PBS (pH 7.4-7.5). Sterile-filtered colorless solution. |
| Reconstitution | Reconstitute in sterile distilled H ₂ O to no less than 100 µg/mL; dilute reconstituted stock further in other aqueous solutions if needed. Please review COA for lot-specific instructions. Final measurements should be determined by the end-user for optimal performance. |
| GENE INFORMATION | |
| Gene Name | CD19 CD19 molecule [Homo sapiens (human)] |
| 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; CVID3; MGC12802; |
| Gene ID | 930 |
| mRNA Refseq | NM_001178098 |
| Protein Refseq | NP_001171569 |
| MIM | 107265 |
| UniProt ID | P15391 |

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