CD19 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P70505
Synonyms:	B-Lymphocyte Antigen CD19; B-Lymphocyte Surface Antigen B4; Differentiation Antigen CD19; T-Cell Surface Antigen Leu-12; CD19
Species:	Human
Source:	HEK293
Accession:	P15391 (P20-K291)
Gene ID:	930
Molecular Weight:	Approximately 85.0 kDa

PROPERTIES

AA Sequence	P E E P L V V K V E E G D N A V L Q C L K G T S D G P T Q Q L T W S R E S P L K P F L K L S L G L P G L G I H M R P L A I W L F I F N V S Q Q M G G F Y L C Q P G P P S E K A W Q P G W T V N V E G S G E L F R W N V S D L G G L G C G L K N R S S E G P S S P S G K L M S P K L Y V W A K D R P E I W E G E P P C L P P R D S L N Q S L S Q D L T M A P G S T L W L S C G V P P D S V S R G P L S W T H V H P K G P K S L L S L E L K D D R P A R D M W V M E T G L L L P R A T A Q D A G K Y Y C H R G N L T M S F H L E I T A R P V L W H W L L R T G G W K
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	The CD19 Protein serves as a coreceptor for the B-cell antigen receptor complex (BCR) on B-lymphocytes, playing a pivotal role in decreasing the threshold for activation of downstream signaling pathways and facilitating B-cell responses to antigens. It activates signaling pathways leading to the activation of phosphatidylinositol 3-kinase and the mobilization of intracellular Ca(2+) stores. Although not required for early steps during B cell differentiation in the blood marrow, CD19 is essential for the normal differentiation of B-1 cells. Moreover, it is crucial for normal B cell differentiation and proliferation

in response to antigen challenges, influencing serum immunoglobulin levels and the production of high-affinity antibodies in response to antigen challenge. CD19 forms complexes with CR2/CD21, CD81, and IFITM1/CD225 in the membrane of mature B-cells. It interacts directly with CD81, a crucial interaction for trafficking and compartmentalization of the CD19 receptor on the cell surface of activated B cells. Additionally, CD19 interacts with VAV, GRB2, SOS, PLCG2, LYN, and the regulatory p85 subunit of phosphatidylinositol 3-kinase when phosphorylated on specific tyrosine residues.

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