CD19 Protein, Human (Biotinylated, Fc)

Cat. No.:	HY-P78917
Synonyms:	CD19; B4; CVID3; MGC12802
Species:	Human
Source:	HEK293
Accession:	P15391 (P20-K291)
Gene ID:	930
Molecular Weight:	60-90 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Anti-CD19 antibody at 1 μg/mL can bind Biotinylated Human CD19. The EC_{50} is 44.90-68.72 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 μm filtered solution of PBS, 6% Trehalose, 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.
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.

Caution: Product has not been fully validated for medical applications. For research use only.

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