

CD19 Protein, Human (HEK293, His)

Cat. No.:	HY-P74330
Synonyms:	B-lymphocyte antigen CD19; CD19; B-lymphocyte surface antigen B4
Species:	Human
Source:	HEK293
Accession:	P15391-1 (M1-K291)
Gene ID:	930
Molecular Weight:	Approximately 47 kDa

PROPERTIES

Biological Activity	Immobilized human CD19-His at 2 µg/mL (100 µL/well) can bind Anti-CD19 Antibody and the EC ₅₀ is 5-40 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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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