

CD19 Protein, Mouse (Biotinylated, HEK293, His)

Cat. No.:	HY-P77527
Synonyms:	B-lymphocyte antigen CD19; CD19; B-lymphocyte surface antigen B4
Species:	Mouse
Source:	HEK293
Accession:	P25918 (G17-G287)
Gene ID:	12478
Molecular Weight:	Approximately 31 kDa.

PROPERTIES

AA Sequence	<pre> G G R P Q K S L L V E V E E G G N V V L P C L P D S S P V S S E K L A W Y R G N Q S T P F L E L S P G S P G L G L H V G S L G I L L V I V N V S D H M G G F Y L C Q K R P P F K D I W Q P A W T V N V E D S G E M F R W N A S D V R D L D C D L R N R S S G S H R S T S G S Q L Y V W A K D H P K V W G T K P V C A P R G S S L N Q S L I N Q D L T V A P G S T L W L S C G V P P V P V A K G S I S W T H V H P R R P N V S L L S L S L G G E H P V R E M W V W G S L L L L P Q A T A L D E G T Y Y C L R G N L T I E R H V K V I A R S A V W L W L L R T G G </pre>
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	CD19 protein functions as a coreceptor for the B-cell antigen receptor complex (BCR) on B-lymphocytes, effectively reducing the threshold for downstream signaling pathways and initiating B-cell responses to antigens. It activates signaling cascades leading to phosphatidylinositol 3-kinase activation and mobilization of intracellular Ca ²⁺ stores. While not essential for early B cell differentiation in the bone marrow, CD19 is crucial for the normal differentiation of B-1 cells and plays a vital role in B cell differentiation and proliferation in response to antigen challenges. Furthermore, CD19 is required for maintaining
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normal levels of serum immunoglobulins and the production of high-affinity antibodies upon antigen exposure. CD19 interacts with CR2/CD21 and forms a complex with CD81, CR2/CD21, CD81, and IFITM1/CD225 in the membrane of mature B-cells. It also interacts directly with CD81, essential for trafficking and compartmentalization of the CD19 receptor on the cell surface when phosphorylated on specific tyrosine residues. Additionally, CD19 interacts with PLCG2 when phosphorylated on Tyr-402 and with LYN, and it forms an interaction with the regulatory p85 subunit of phosphatidylinositol 3-kinase (PI3K) when tyrosine phosphorylated.

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

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