# Active Recombinant Human CD19 Protein, His Tagged

**Cat. No.** CD19-26H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Human CD19 (20-291) Protein, His Tag is expressed from CHO cells. It contains AA Pro 20-Lys 291 (Accession # P15391-1). This protein carries a polyhistidine tag at the C-terminus. Predicted N-terminus: Pro 20 |
| **Species** | Human |
| **Source** | CHO |
| **ProteinLength** | 20-291 aa |
| **Description** | B-lymphocyte antigen CD19 is also known as CD19 (Cluster of Differentiation 19), is a single-pass type I membrane protein which contains two Ig-like C2-type (immunoglobulin-like) domains. CD19 is expressed on follicular dendritic cells and B cells. In fact, it is present on B cells from earliest recognizable B-lineage cells during development to B-cell blasts but is lost on maturation to plasma cells. It primarily acts as a B cell co-receptor in conjunction with CD21 and CD81. Upon activation, the cytoplasmic tail of CD19 becomes phosphorylated, which leads to binding by Src-family kinases and recruitment of PI-3 kinase. As on T cells, several surface molecules form the antigen receptor and form a complex on B lymphocytes. The (almost) B cell-specific CD19 phosphoglycoprotein is one of these molecules. The others are CD21 and CD81. These surface immunoglobulin (sIg)-associated molecules facilitate signal transduction. On living B cells, anti-immunoglobulin antibody mimicking exogenous antigen causes CD19 to bind to sIg and internalize with it. The reverse process has not been demonstrated, suggesting that formation of |

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| | this receptor complex is antigen-induced. This molecular association has been confirmed by chemical studies. Mutations in CD19 are associated with severe immunodeficiency syndromes characterized by diminished antibody production. CD19 has been shown to interact with: CD81, CD82, Complement receptor 2, and VAV2. |
| **Form** | Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant. |
| **Bio-activity** | Immobilized Human CD19 (20-291) Protein, His Tag at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-Human CD19 Antibody, Mouse IgG2a with a linear range of 0.1-3 ng/mL. |
| **Molecular Mass** | The protein has a calculated MW of 32.0 kDa. The protein migrates as 45-60 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation. |
| **Endotoxin** | Less than 1.0 EU/μg by the LAL method/rFC method. |
| **Purity** | >90% as determined by SDS-PAGE. |
| **Storage** | This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. |
| **Reconstitution** | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents. |

## GENE INFORMATION

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| **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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