

## Active Recombinant Human CD19 Protein, Fc-tagged, Alexa Fluor 647 conjugated

**Cat. No.** CD19-3308HAF647    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b> | Alexa Fluor 647 conjugated recombinant human CD19 Protein, With C-Fc Tag (rh CD19 Fc Chimera) Pro 20 - Lys 291 (Accession # AAH06338) was produced in human 293 cells (HEK293).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>    | 20-291 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>      | <p>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</p> |

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with it. The reverse process has not been demonstrated, suggesting that formation of 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.

|                                     |                                                                                                                                                                                                                                 |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>                         | Lyophilized                                                                                                                                                                                                                     |
| <b>Bio-activity</b>                 | Measured by its binding ability in a functional ELISA. Immobilized rhCD9 at 2 µg/mL (100 µL/well) can bind human CD19 Fc Chimera with a linear ranger of 50-500 ng/mL, when detected by HRP*-Goat anti Human IgG, Fcy Fragment. |
| <b>Molecular Mass</b>               | rh CD19 Fc Chimera is fused with a human IgG1 Fc tag at the C-terminus, and has a calculated MW of 56.3 kDa. DTT-reduced Protein migrates as 56-66 kDa in SDS-PAGE due to glycosylation.                                        |
| <b>N-terminal Sequence Analysis</b> | Pro 20                                                                                                                                                                                                                          |
| <b>Endotoxin</b>                    | < 1.0 EU/ µg of the rh CD19 Fc Chimera by the LAL method.                                                                                                                                                                       |
| <b>Purity</b>                       | > 95 % as determined by SDS-PAGE                                                                                                                                                                                                |
| <b>Characteristic</b>               | Disulfide-linked homodimer<br>Labeled with Alexa Fluor 647 via amines<br>Excitation = 650 nm<br>Emission = 668 nm                                                                                                               |
| <b>Storage</b>                      | Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4 centigrade); After reconstitution under sterile conditions for 3 months (-70 centigrade).                 |

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**Storage Buffer** Lyophilized from 0.22 µm filtered solution in 50 mM tris, 100 mM glycine, pH7.5. Normally Mannitol or Trehalose are added as protectants before lyophilization.

**Conjugation** Alexa Fluor 647

## GENE INFORMATION

**Gene Name** CD19 CD19 molecule [ Homo sapiens ]

**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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