

# Human CD19/B4 protein, His Tag



Catalog #: VLX 10003

## Basic Information

### Gene Aliases:

B4, CVID3.

### Protein Structure:

CD19 protein was consisted of extracellular domain from Pro20 to Lys291 with a C-terminus polyhistidine tag.

**Source:** Human.

**Expression Host:** 293F Cells .

### Predicted N-terminus:

Pro 20.

### Molecular Weight:

The protein consists of 271 amino acids and software predicts a molecular weight was 34.0 KDa, the SDS-PAGE displays an 43-55 KDa band.

### Purity:

>90% as determined by SDS-PAGE.

### Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH 7.4. Normal mannitol or trehalose are added as protectants before lyophilization.

### Reconstitution

You can add the volume of sterile water you need. We recommend add 50  $\mu$ L sterile water to the concentration of 1  $\mu$ g/ $\mu$ l if you order 50  $\mu$ g Freeze-dried powder.

### Storage

Lyophilized protein should keep drying and be stored at -20°C for less than 6 months; Reconstituted protein was recommended to be stored at -70°C for less than 12 months .

**Please avoid repeated freeze-thaw cycles**

### Bioactivity

Measured by its binding ability with ELISA . CD19 antibody was expressed by the sequence of Novartis in HEK 293 cell. The CD19 protein can bind 4 $\mu$ g/ml antibody with a linear range of 0.025-1 $\mu$ g/ml

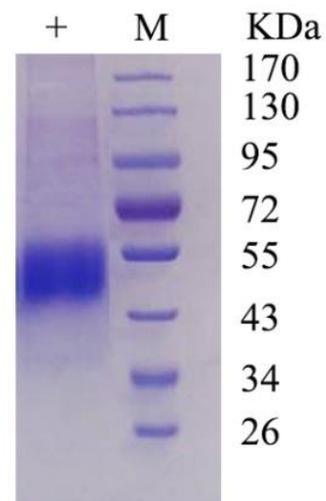
## Background:

The membrane protein complex CD19/CD21 couples the innate immune recognition of microbial antigens by the complement system to the activation of B cells. CD21 binds the C3d fragment of activated C3 that becomes covalently attached to targets of complement activation, and CD19 co-stimulates signaling through the antigen receptor, membrane immunoglobulin. CD21 is also expressed by follicular dendritic cells and mediates the long-term retention of antigen that is required for the maintenance of memory B cells. Understanding of the biology of this receptor complex has been enriched by analyses of genetically modified mice; these analyses have uncovered roles not only in positive responses to foreign antigens, but also in the development of tolerance to self-antigens. Studies of signal transduction have begun to determine the basis for the coreceptor activities of CD19. The integration of innate and adaptive immune recognition at this molecular site on the B cell guides the appropriate selection of antigen by adaptive immunity and emphasizes the importance of this coreceptor complex.

## References:

1. Fearon, Douglas T., Michael C. Carroll, and Michael C. Carroll. "Regulation of B lymphocyte responses to foreign and self-antigens by the CD19/CD21 complex." Annual review of immunology 18.1 (2000): 393-422.

## SDS-PAGE:



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