

## Product datasheet for PH302922

### CD19 (NM\_001770) Human Mass Spec Standard

#### Product data:

|                                       |  |
|---------------------------------------|--|
| Product Type:                         | Mass Spec Standards  |
| Description:                          | CD19 MS Standard C13 and N15-labeled recombinant protein (NP_001761) |
| Species:                              | Human  |
| Expression Host:                      | HEK293   |
| Expression cDNA Clone or AA Sequence: | RC202922   |
| Predicted MW:                         | 61.1 kDa   |
| Protein Sequence:                     | >RC202922 protein sequence<br>Red=Cloning site Green=Tags(s)         |

MPPRLLFFLLFLTPMEVRPEEPLVVKVEEGDNAVLQCLKGTS DGPTQQLTWSRESPLKPFLLKLSLGLPG  
LGIHMRPLAIWLFIFNVSQMGGFYLCQPGPPSEKAWQPGWTVNVEGSGELFRWNVSDLGGLGCGLKNRS  
SEGSSPSGKLMSPKLYWAKDRPEIWE GEPCLPPRDSL NQSLSQDL TMAPGSTLWLCGVPPDSVSRG  
PLSWTHVHPKPKSLLSLELKDDRPARDMWMETGLLLPRATAQDAGKYCHRGNTMSFHLEITARPVL  
WHWLLRTGGWKVSAVTLAYLIFCLCSLVGILHLQRALVLRKRKRMTDPTRRFFKVT PPPGSGPQNQYGN  
VLSLPTPTSGLGRAQRWAAGLGGTAPSYGNPSSDVQADGALGSRSPGVGPEEEEEEGEGYEEPDSEEDSEF  
YENDSNLQDQLSQDGSYENPEDEPLGPEDEDSF SNAESYENEDEEL TQPVARTMDFLSPHGS AWDPSR  
EATSLGSQSYEDMRGILYAAPQLRSIRGQPGPNHEEDADSYENMDNPDGDPDPAWGGGGRMGTWSTR

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

|                  |  |
|------------------|--|
| Tag:             | C-Myc/DDK  |
| Purity:          | > 80% as determined by SDS-PAGE and Coomassie blue staining  |
| Concentration:   | >0.05 µg/µL as determined by microplate BCA method   |
| Labeling Method: | Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine |
| Buffer:          | 25 mM Tris-HCl, 100 mM glycine, pH 7.3   |
| Storage:         | Store at -80°C. Avoid repeated freeze-thaw cycles.   |
| Stability:       | Stable for 3 months from receipt of products under proper storage and handling conditions.   |
| RefSeq:          | <u>NP_001761</u>   |
| RefSeq Size:     | 1965   |
| RefSeq ORF:      | 1668   |



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**Synonyms:** B4; CVID3

**Locus ID:** 930

**UniProt ID:** [P15391](#)

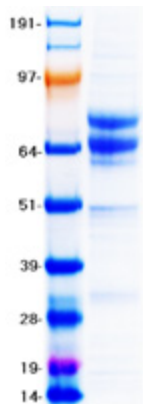
**Cytogenetics:** 16p11.2

**Summary:** This gene encodes a member of the immunoglobulin gene superfamily. Expression of this cell surface protein is restricted to B cell lymphocytes. This protein is a reliable marker for pre-B cells but its expression diminishes during terminal B cell differentiation in antibody secreting plasma cells. The protein has two N-terminal extracellular Ig-like domains separated by a non-Ig-like domain, a hydrophobic transmembrane domain, and a large C-terminal cytoplasmic domain. This protein forms a complex with several membrane proteins including complement receptor type 2 (CD21) and tetraspanin (CD81) and this complex reduces the threshold for antigen-initiated B cell activation. Activation of this B-cell antigen receptor complex activates the phosphatidylinositol 3-kinase signalling pathway and the subsequent release of intracellular stores of calcium ions. This protein is a target of chimeric antigen receptor (CAR) T-cells used in the treatment of lymphoblastic leukemia. Mutations in this gene are associated with the disease common variable immunodeficiency 3 (CVID3) which results in a failure of B-cell differentiation and impaired secretion of immunoglobulins. CVID3 is characterized by hypogammaglobulinemia, an inability to mount an antibody response to antigen, and recurrent bacterial infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2020]

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** B cell receptor signaling pathway, Hematopoietic cell lineage, Primary immunodeficiency

### Product images:



Coomassie blue staining of purified CD19 protein (Cat# [TP302922]). The protein was produced from HEK293T cells transfected with CD19 cDNA clone (Cat# [RC202922]) using MegaTran 2.0 (Cat# [TT210002]).