

**PRODUCT INFORMATION**

<b>Tag</b>	C-Flag&Avi Tag
<b>Expression Host</b>	HEK293
<b>Target</b>	CD19
<b>Synonyms</b>	B4; CVID3
<b>Description</b>	Biotinylated Human CD19 full length protein-PeptiNanodisc
<b>Uniprot ID</b>	P15391
<b>Protein Families</b>	Druggable Genome, Transmembrane
<b>Protein Pathways</b>	B cell receptor signaling pathway, Hematopoietic cell lineage, Primary immunodeficiency
<b>Molecular Weight</b>	The human full length CD19 protein has a MW of 61.1 kDa
<b>Delivery</b>	In Stock
<b>Formulation &amp; Reconstitution</b>	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions.
<b>Sterility</b>	Products are supplied non-sterile. For cell culture applications, dilute in appropriate medium and sterile-filter (0.22 µm) prior to use.
<b>Storage&amp;Shipping</b>	Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
<b>Background</b>	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.
<b>Usage</b>	Research use only
<b>Conjugate</b>	Biotinylated



**ELISA assay to evaluate Biotinylated CD19-PeptiNanodisc**  
**0.2µg Human Biotinylated CD19-PeptiNanodisc per well**

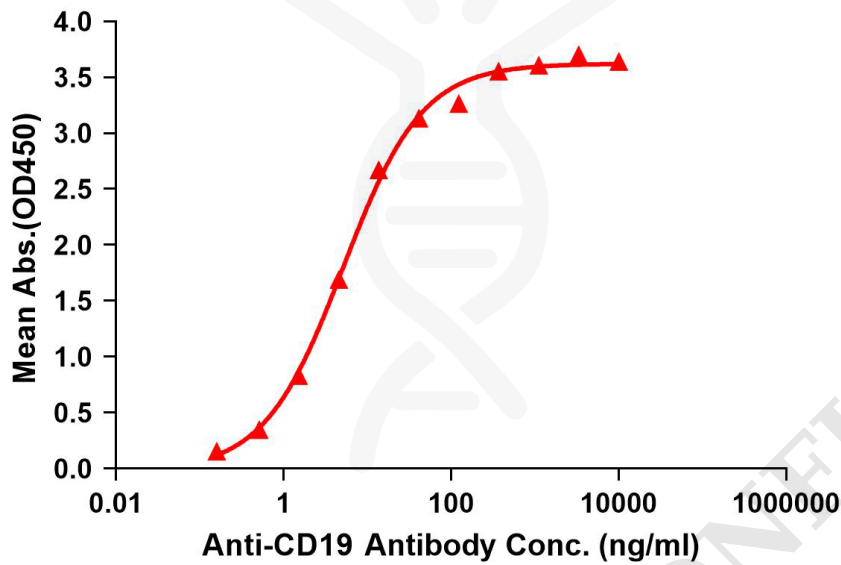


Figure 1. Elisa plates were added with C-Flag&Avi Tag Biotinylated CD19-PeptiNanodisc (0.2µg/per well) on a Streptavidin pre-coated (0.2µg/per well) plate. Serial diluted anti-CD19 monoclonal antibody (BME100051) solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-CD19 monoclonal antibody binding with Biotinylated CD19-PeptiNanodisc is 5.141ng/ml.

kDa M R

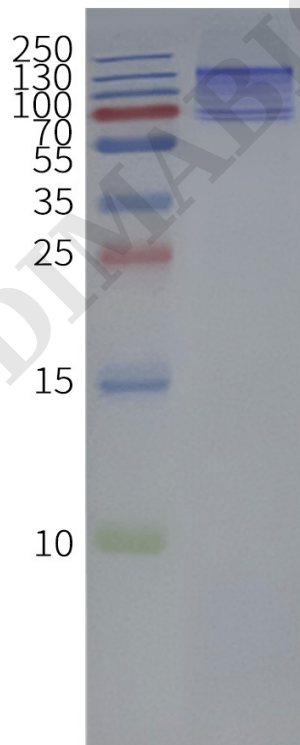


Figure 2. Biotinylated Human CD19-PeptiNanodisc, C-Flag&Avi Tag on SDS-PAGE



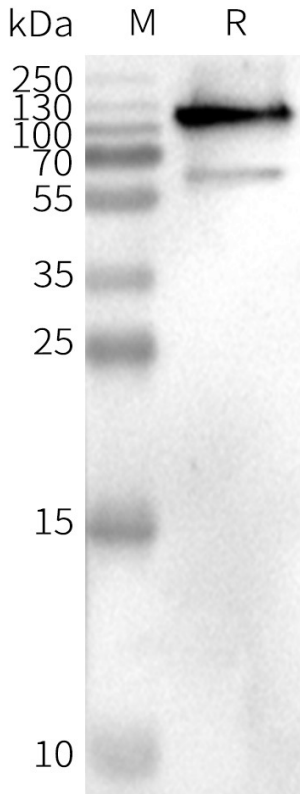


Figure 3. WB analysis of Biotinylated Human CD19-PeptiNanodisc with anti-CD19 monoclonal antibody (BME100051) at 1 $\mu$ g/ml, followed by Goat Anti-Human IgG HRP at 1/5000 dilution

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