PRODUCT INFORMATION

Tag	C-Flag&Avi Tag
Target	CD19
Synonyms	B4; CVID3
Description	Biotinylated Human CD19 full length protein-PeptiNanodisc
Delivery	In Stock
Uniprot ID	P15391
Expression Host	HEK293
Protein Families	Druggable Genome, Transmembrane
Protein Pathways	B cell receptor signaling pathway, Hematopoietic cell lineage, Primary immunodeficiency
Molecular Weight	The human full length CD19 protein has a MW of 61.1 kDa
Formulation & Reconstitution	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.
Storage&Shipping	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.
Background	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.
Usage	Research use only
Conjugate	Biotinylated

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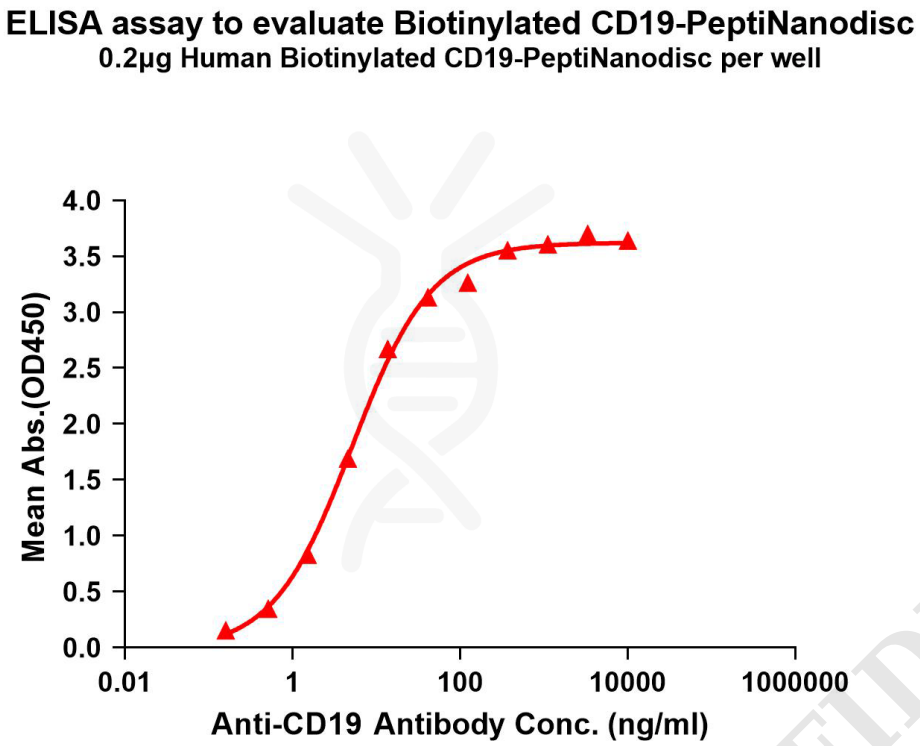

Figure 1. Elisa plates were added with C-Flag&Avi Tag Biotinylated CD19 peptiNanodisc (0.2μg/per well) on a Streptavidin pre-coated (0.2μg/per well) plate. Serial diluted anti-CD19 monoclonal antibody (BME100051) solutions were added, washed, and incubated with secondary antibody before Elisa reading.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

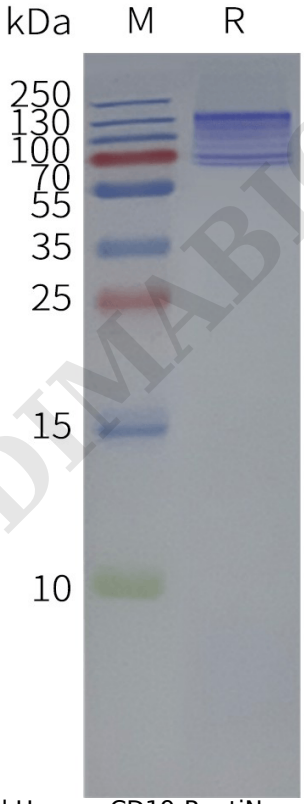

Figure 2. Biotinylated Human CD19-PeptiNanodisc, C-Flag&Avi Tag on SDS-PAGE

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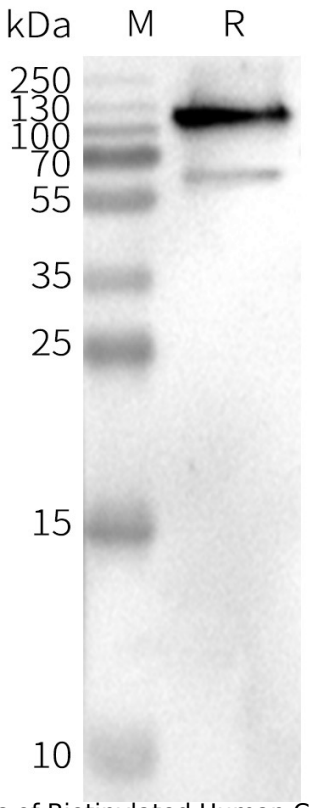

Figure 3. WB analysis of Biotinylated Human CD19-PeptiNanodisc with anti-CD19 monoclonal antibody (BME100051) at 1μg/ml, followed by Goat Anti-Human IgG HRP at 1/5000 dilution

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