



Recombinant Protein Technical Manual

Recombinant Human SIGLEC2/CD22 Protein (aa 176-687, His Tag)
RPES0565

Product Data:

Product SKU: RPES0565

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: Q32M46

Protein Information:

Molecular Mass: 58.5 kDa

AP Molecular Mass: 9000 kDa

Tag: C-His

Bio-activity:

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: B-cell receptor CD22; BL-CAM; B-lymphocyte cell adhesion molecule; CD22 antigen MGC130020; CD22 molecule; CD22; sialic acid binding Ig-like lectin 2; Siglec-2; SIGLEC2FLJ22814; T-cell surface antigen Leu4; SIGLEC-2; Siglec-2

Immunogen Information:

Sequence: Trp176-Arg687

Background:

CD22 is a member of the immunoglobulin superfamily, SIGLEC family of lectins. It is first expressed in the cytoplasm of pro-B and pre-B cells, and on the surface as B cells mature to become IgD+. CD22 serves as an adhesion receptor for sialic acid-bearing ligands expressed on erythrocytes and all leukocyte classes. In addition to its potential role as a mediator of intercellular interactions, signal transduction through CD22 can activate B cells and modulate antigen receptor signaling in vitro. The phenotype of CD22-deficient mice suggests that CD22 is primarily involved in the generation of mature B cells within the bone marrow, blood, and marginal zones of lymphoid tissues. CD22 recruits the tyrosine phosphatase Src homology 2 domain-containing phosphatase 1 (SHP) to immunoreceptor tyrosine-based inhibitory motifs (ITIMs) and inhibits B-cell receptor (BCR)-induced Ca²⁺ signaling on normal B cells. CD22 interacts specifically with ligands carrying alpha2-6-linked sialic acids. As an inhibitory coreceptor of the B-cell receptor (BCR), CD22 plays a critical role in establishing signalling thresholds for B-cell activation. Like other coreceptors, the ability of CD22 to modulate B-cell signalling is critically dependent upon its proximity to the BCR, and this in turn is governed by the binding of its extracellular domain to alpha2,6-linked sialic acid ligands. However, genetic studies in mice reveal that some CD22 functions are regulated by ligand binding, whereas other functions are ligand-independent and may only require expression of an intact CD22 cytoplasmic domain at the B-cell surface. CD19 regulates CD22 phosphorylation by augmenting Lyn kinase activity, while CD22 inhibits CD19 phosphorylation via SHP.