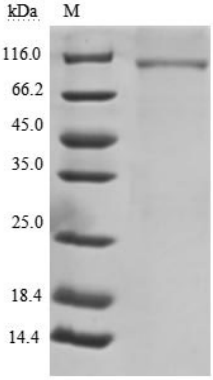
Recombinant Human B-cell receptor CD22 (CD22), partial (Active)

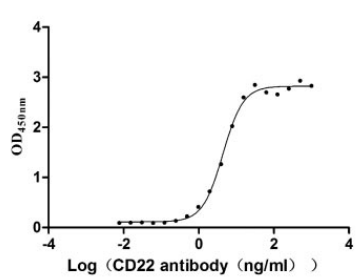
Product Code	CSB-MP004900HU
Relevance	Mediates B-cell B-cell interactions. May be involved in the localization of B-cells in lymphoid tissues. Binds sialylated glycoproteins; one of which is CD45. Preferentially binds to alpha-2,6-linked sialic acid. The sialic acid recognition site can be masked by cis interactions with sialic acids on the same cell surface. Upon ligand induced tyrosine phosphorylation in the immune response seems to be involved in regulation of B-cell antigen receptor signaling. Plays a role in positive regulation through interaction with Src family tyrosine kinases and may also act as an inhibitory receptor by recruiting cytoplasmic phosphatases via their SH2 domains that block signal transduction through dephosphorylation of signaling molecules.
Abbreviation	Recombinant Human CD22 protein, partial (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P20273
Storage Buffer	Lyophilized from a 0.2 μm filtered 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized CD22 at 2 μg/ml can bind Anti-CD22 rabbit monoclonal antibody, the EC50 of human CD22 protein is 4.034-4.800 ng/ml.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	DSSKWVFEHPETLYAWEGACVWIPCTYRALDGDLESFILFHNPEYNKNTSKFD GTRLYESTKDGKVPSEQKRVQFLGDKNKNCTLSIHPVHLNDSGQLGLRMESK TEKWMERIHLNVSERPFPPHIQLPPEIQESQEVTLTCLLNFSCYGYPIQLQWLL EGVPMRQAAVTSTSLTIKSVFTRSELKFSPQWSHHGKIVTCQLQDADGKFLSN DTVQLNVKHTPKLEIKVTPSDAIVREGDSVTMTCEVSSSNPEYTTVSWLKDGT SLKKQNTFTLNLREVTKDQSGKYCCQVSNDVGPGRSEEVFLQVQYAPEPSTV QILHSPAVEGSQVEFLCMSLANPLPTNYTWYHNGKEMQGRTEEKVHIPKILPW HAGTYSCVAENILGTGQRGPGAELDVQYPPKKVTTVIQNPMPIREGDTVTLSC NYNSSNPSVTRYEWKPHGAWEEPSLGVLKIQNVGWDNTTIACAACNSWCSW ASPVALNVQYAPRDVRVRKIKPLSEIHSGNSVSLQCDFSSSHPKEVQFFWEKN GRLLGKESQLNFDSISPEDAGSYSCWVNNSIGQTASKAWTLEVLYAPRRLRVS MSPGDQVMEGKSATLTCESDANPPVSHYTWFDWNNQSLPYHSQKLRLEPVK VQHSGAYWCQGTNSVGKGRSPLSTLTVYYSPETIGRR
Research Area	Cancer

Source	Mammalian cell
Target Names	CD22
Expression Region	20-687aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	77.9 kDa
Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized CD22 at 2 μg/ml can bind Anti-CD22 rabbit monoclonal antibody, the EC_{50} of human CD22 protein is 4.034-4.800 ng/ml.

Description

The human B-cell receptor CD22 mediates the interactions of the B-cell and the B-cell antigen receptor signaling. It responds to sialylated glycoproteins and can be affected by free sialic acid. Its function is the regulation of cell adhesion, immunoglobulin secretion, and B-cell proliferation. The recombinant protein is the 20-687aa region of the CD22, expressed in mammalian cells. The protein was fused with a 6xHis-tag on the C-terminus, with a molecular weight of 77.9 kDa. SDS-PAGE analysis shows that the product has a purity greater than 90%. As well, it was determined by ELISA that the EC_{50} was 4.034-4.800 ng/ml for binding to the Anti-CD22 rabbit monoclonal antibody. The final product has low levels of endotoxin, with less than 1.0 EU/μg as determined by the LAL method. The protein can be used on binding and modulation essays; this with the scope to determinate novel antigens presented by IgM, B-cell differentiation, and modulation and immunoglobulin production studies. It can be used as well in cancer research on tumoral antigen response and modulation.

Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.