Siglec-2/CD22 Protein, Human (Biotinylated, 512a.a, HEK293, His)

Cat. No.:	HY-P77539
Synonyms:	B-cell receptor CD22; BL-CAM; Siglec-2; CD22; SIGLEC2
Species:	Human
Source:	HEK293
Accession:	P20273 (W176-R687)
Gene ID:	933
Molecular Weight:	Approximately 58.5 kDa.

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Siglec-2/CD22 Protein serves as a crucial mediator in B-cell interactions, potentially playing a role in the localization of B-cells within lymphoid tissues. Known for its ability to bind sialylated glycoproteins, including CD45, it exhibits a preference for alpha-2,6-linked sialic acid. The sialic acid recognition site may be masked by cis interactions with sialic acids on the same cell surface. During the immune response, ligand-induced tyrosine phosphorylation suggests its involvement in the regulation of B-cell antigen receptor signaling. The protein's multifaceted role encompasses positive regulation through interaction with Src family tyrosine kinases, while concurrently acting as an inhibitory receptor by recruiting cytoplasmic phosphatases via their SH2 domains to block signal transduction through dephosphorylation of signaling molecules. Siglec-2/CD22 predominately exists as a monomer of isoform CD22-beta and can also form a heterodimer with a shorter isoform. Its intricate interactions with key molecules such as PTPN6/SHP-1, LYN, SYK, PIK3R1/PIK3R2, PLCG1, GRB2, INPP5D, and SHC1, especially upon phosphorylation, highlight its pivotal role in orchestrating complex signaling networks within B-cells. Further research is essential to unravel the precise molecular pathways and functional consequences of Siglec-2/CD22 in B-cell regulation and immune responses.

Caution: Product has not been fully validated for medical applications. For research use only.

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