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Siglec-10

Catalog # PVGS1613

Product Information

Primary Accession	Q96LC7
Species	Human
Sequence	Met17-Thr546
Purity	> 90% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	Immobilized CD24-His (CD4-H52H3-100 μg) at 5.0 μg/ml (100 μl/well) can bind Siglec-10, hFc, Human.
Expression System	HEK 293
Formulation	Supplied as a solution in PBS, pH 7.0-7.2.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -20°C or below. Please avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	89790
Other Names	Sialic acid-binding Ig-like lectin 10, Siglec-10, Siglec-like protein 2, SIGLEC10, SLG2
Target Background	Siglec-10 is immune system-restricted and highly expressed in peripheral blood leukocytes. Siglec-10 preferably binds to α-2,3- or α-2,6-linked sialic acid (similarity). Siglec10 is involved in the negative regulation of B cell antigen receptor signal transduction. The inhibition of B cell activation depends on PTPN6/SHP-1 (by similarity). The binding of Siglec10 to CD24 may be involved in the selective suppression of the immune response (by similarity) to risk-related molecular patterns (DAMPs) (such as HMGB1, HSP70 and HSP90). The combination of Siglec10 and CD24 may regulate the immune response of natural killer (NK) cells. Play a role in controlling autoimmunity (by similarity). In the process of initiating an adaptive immune response by CD8-α+ dendritic cells, cross-presentation is inhibited by weakening the formation of MHC class I peptide complexes. The function seems to imply the recruitment of PTPN6/SHP-1, which dephosphorylates NCF1 of the NADPH oxidase complex, thereby promoting phagosome acidification (by similarity).

Protein Information

Name	SIGLEC10

Synonyms	SLG2
Function	Putative adhesion molecule that mediates sialic-acid dependent binding to cells. Preferentially binds to alpha-2,3- or alpha-2,6-linked sialic acid (By similarity). The sialic acid recognition site may be masked by cis interactions with sialic acids on the same cell surface. In the immune response, seems to act as an inhibitory receptor upon ligand induced tyrosine phosphorylation by recruiting cytoplasmic phosphatase(s) via their SH2 domain(s) that block signal transduction through dephosphorylation of signaling molecules (PubMed:11284738, PubMed:12163025). Involved in negative regulation of B-cell antigen receptor signaling. The inhibition of B cell activation is dependent on PTPN6/SHP-1 (By similarity). In association with CD24 may be involved in the selective suppression of the immune response to danger-associated molecular patterns (DAMPs) such as HMGB1, HSP70 and HSP90 (By similarity). In association with CD24 may regulate the immune repsonse of natural killer (NK) cells (PubMed:25450598). Plays a role in the control of autoimmunity (By similarity). During initiation of adaptive immune responses by CD8- alpha(+) dendritic cells inhibits cross-presentation by impairing the formation of MHC class I-peptide complexes. The function seems to implicate recruitment of PTPN6/SHP-1, which dephosphorylates NCF1 of the NADPH oxidase complex consequently promoting phagosomal acidification (By similarity).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 3]: Cell membrane; Single-pass type I membrane protein [Isoform 5]: Secreted.
Tissue Location	Expressed by peripheral blood leukocytes (eosinophils, monocytes and a natural killer cell subpopulation) Isoform 5 is found to be the most abundant isoform. Found in lymph node, lung, ovary and appendix. Isoform 1 is found at high levels and isoform 2 at lower levels in bone marrow, spleen and spinal cord Isoform 2 is also found in brain. Isoform 4 is specifically found in natural killer cells.