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SIGLEC7 (D-siglec) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1625A

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9Y286
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2462
Calculated MW	51143
Antigen Region	1-30

Additional Information

Gene ID	27036
Other Names	Sialic acid-binding Ig-like lectin 7, Siglec-7, Adhesion inhibitory receptor molecule 1, AIRM-1, CDw328, D-siglec, QA79 membrane protein, p75, CD328, SIGLEC7, AIRM1
Target/Specificity	This SIGLEC7 (D-siglec) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human SIGLEC7 (D-siglec).
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SIGLEC7 (D-siglec) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SIGLEC7
Synonyms	AIRM1
Function	Putative adhesion molecule that mediates sialic-acid dependent binding to

	cells. Preferentially binds to alpha-2,3- and alpha-2,6-linked sialic acid. Also binds disialogangliosides (disialogalactosyl globoside, disialyl lactotetraosylceramide and disialyl GalNAc lactotetraoslylceramide). The sialic acid recognition site may be masked by cis interactions with sialic acids on the same cell surface. In the immune response, may 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. Mediates inhibition of natural killer cells cytotoxicity. May play a role in hemopoiesis. Inhibits differentiation of CD34+ cell precursors towards myelomonocytic cell lineage and proliferation of leukemic myeloid cells (in vitro).
Cellular Location	Membrane; Single-pass type I membrane protein.
Tissue Location	Predominantly expressed by resting and activated natural killer cells and at lower levels by granulocytes and monocytes High expression found in placenta, liver, lung, spleen, and peripheral blood leukocytes

Background

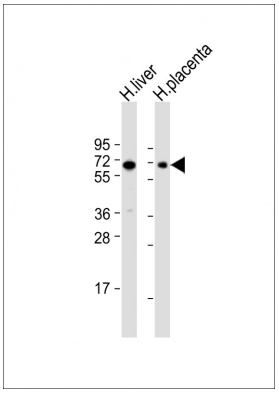
SIGLECs are members of the immunoglobulin superfamily that are expressed on the cell surface. Most SIGLECs have one or more cytoplasmic immune receptor tyrosine-based inhibitory motifs (ITIM). SIGLECs are typically expressed on cells of the innate immune system, with the exception of the B-cell expressed SIGLEC6. Sequence analysis predicted that the 697-amino acid SIGLEC10 protein contains a signal peptide, an N-terminal V-set Ig-like domain and four C2-set Ig-like domains, five potential N-linked glycosylation sites, a transmembrane region, and a 126-residue cytoplasmic tail with 3 putative ITIMs. Northern blot analysis detected a major 3.0-kb SIGLEC10 transcript, with highest levels in spleen, lymph node, blood leukocytes, and appendix. Little or no expression was observed in pancreas, thyroid, and testis. Flow cytometric analysis demonstrated eosinophil-specific expression of SIGLEC10, but at a lower level than that of SIGLEC8. Expression was also detected on monocytes and a CD16-positive/CD56-negative natural killer-like lymphocyte population. After sialidase treatment, which is necessary for unmasking the sialic acid-binding site on SIGLECs interacting with cell surface sialic acids, cells expressing SIGLEC10 bound to red blood cells. Immunoprecipitation analysis indicated expression of a 100- to 120-kD monomeric protein, higher than the predicted molecular mass, suggesting that SIGLEC10 is glycosylated.

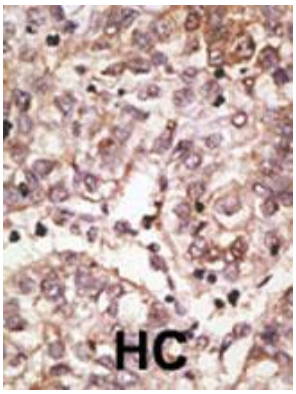
References

Nicoll, G., et al., Eur. J. Immunol. 33(6):1642-1648 (2003).
Alphey, M.S., et al., J. Biol. Chem. 278(5):3372-3377 (2003).
Angata, T., et al., Glycobiology 10(4):431-438 (2000).
Falco, M., et al., J. Exp. Med. 190(6):793-802 (1999).
Nicoll, G., et al., J. Biol. Chem. 274(48):34089-34095 (1999).

Images

All lanes : Anti-SIGLEC7 Antibody (W20) at 1:1000 dilution Lane 1: human liver lysate Lane 2: human placenta lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 51 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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