Human Syndecan-2/CD362
Alexa Fluor® 350-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 305515R

Catalog Number: FAB29651U

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Syndecan-2/CD362 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Syndecan-1, recombinant human (rh) Syndecan-3, or rhSyndecan-4 is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 305515R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Syndecan-2/CD362 Glu19-Gly144 Accession # AAH49836
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	Human peripheral blood mononuclear cells (PBMCs)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Syndecan-2, previously known as fibroglycan or heparan sulfate proteoglycan, is a member of the syndecan family of Type 1 transmembrane proteins capable of carrying heparan sulfate (HS) and chondroitin sulfate glycosaminoglycans. The four vertebrate syndecans show conserved cytoplasmic domains and divergent extracellular portions (except for GAG attachment sites). Among the Syndecans, Syndecan-2 is most similar to Syndecan-4 (1-3). Human Syndecan-2 is synthesized as a 201 amino acid (aa) core protein with an 18 aa signal sequence, a 126 aa extracellular domain (ECD), a 25 aa transmembrane region and a 32 aa cytoplasmic tail (4). The human ECD of Syndecan-2 contains three closely-spaced consensus Ser-Gly sequences for the attachment of HS side chains. It shares 76%, 73%, 87%, 78% and 63% aa identity with the ECD of mouse, rat, bovine, canine and chicken Syndecan-2, respectively. The cytoplasmic tail has both serine and tyrosine phosphorylation sites. Addition of 20-80 disaccharides per side chain adds considerably to the size of the 22 kDa core protein. Non-covalent homodimerization of Syndecan-2 is dependent on the transmembrane domain (5). Syndecan-2 is expressed in cells of mesenchymal origin, neuronal and epithelial cells, and is the predominant syndecan expressed during embryonic development. Expression is upregulated in several cancer cell lines (6). After induction in macrophages by inflammatory mediators, Syndecan-2 selectively binds FGFbasic, VEGF and EGF (7). Syndecan-2 expressed on human primary osteoblasts binds GM-CSF and may function as a co-receptor (8). Activated endothelial cell Syndecan-2 specifically binds IL-8 and may participate in promoting neutrophil extravasation by forming a chemotactic IL-8 gradient (9). Typically, cytokine, chemokine and extracellular matrix protein binding occurs through interaction with HS side chains, but the Syndecan-2 extracellular domain can bind TGF-β directly via protein-protein interaction (10).

References:

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