

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Syndecan-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse Syndecan-3, recombinant human (rh) Syndecan-1, or rhSyndecan-2 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 374420
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Syndecan-3 Gln48-Lys383 (predicted) Accession # O75056
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

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-3, also called N-syndecan, is one of four vertebrate syndecans that are principal carriers of heparan sulfate and chondroitin sulfate glycosaminoglycans (GAGs) (1-3). These type 1 transmembrane proteins show conserved cytoplasmic domains and divergent extracellular domains (1-3). Human Syndecan-3 is synthesized as a 442 amino acid (aa) core protein with a 44 aa signal sequence, a 343 aa extracellular domain (ECD), a 21 aa transmembrane (TM) region and a 34 aa cytoplasmic tail with a binding site for PDZ domains (1). The ECD of human Syndecan-3 shares 83%, 83%, 92%, 91% and 91% aa identity with mouse, rat, equine, bovine and canine Syndecan-3, respectively. Splice isoforms of 384 aa and 346 aa, containing either a 28 aa substitution for aa 1-86 or deletion of aa 1-96, have been reported (4). Syndecan-3 contains four conserved closely-spaced GAG attachment sites near the N-terminus and unique threonine-rich and mucin-like sequences near the membrane (4). Addition of glycan side chains results in an apparent size of 120-150 kDa. Non-covalent homodimerization of Syndecan-3 or, potentially, heterodimerization with Syndecan-2 or -4, is dependent on the transmembrane domain (5). A cleavage site near the TM domain allows shedding of soluble ECD; the remainder of the molecule undergoes regulated intramembrane proteolysis (6). Syndecan-3 is expressed in the nervous system and at limb buds during development (1, 2). It is expressed on neuronal axons and Schwann cell perinodal processes, promoting nerve cell migration and synapse formation (7, 8). Roles in memory and body weight regulation have been described (2, 9, 10). Through localization of growth factors such as FGF2, HGF and TGF-β, it regulates expression of molecules important for differentiation of muscle and bone, such as myogenin, BMP-2 and hedgehog family members (1, 2, 11-13). In adults, it is upregulated during regeneration, such as following myocardial infarction (14).

PRODUCT SPECIFIC NOTICES

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