

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Syndecan-1/CD138 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Syndecan-1, recombinant mouse (rm) Syndecan-2, rmSyndecan-3, or rmSyndecan-4 is observed.
Source	Monoclonal Rat IgG ₁ Clone # 320611
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Syndecan-1/CD138 isoform 1 Gln18-Glu252 (predicted) Accession # P18828
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	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-1, designated CD138, is a dimeric type I transmembrane (TM) protein that belongs to the Syndecan family of Type 1 transmembrane proteins (1, 2). The four Syndecan family members are major carriers of heparan sulfate (HS) and chondroitin sulfate glycosaminoglycans (GAGs) that have different expression patterns and extracellular sequences. Syndecan-1 forms weak non-covalent homodimers, or heterodimers with Syndecan-2 or -3, through interactions of the transmembrane domain (3). It is synthesized as a 310 amino acid (aa) precursor with a 22 aa signal sequence, a 233 aa extracellular domain (ECD) that includes three closely spaced consensus Ser-Gly HS attachment sites near the N-terminus, a 21 aa TM segment, and a 35 aa cytoplasmic region that includes a PDZ binding motif with a tyrosine phosphorylation site (4). The ECD is variably modified by GAGs, producing molecular weights of 120-200 kDa for native Syndecan-1. Soluble forms are shed *via* proteolytic cleavage. Mouse Syndecan-1 ECD shares 70% and 87% aa identity with the ECD of human and rat Syndecan-1, respectively. Alternative splicing in mouse generates an isoform with an internal deletion of 44 aa from the ECD (5). Syndecan-1 shows highest expression on epithelial cells such as keratinocytes, and terminally differentiated B cells such as plasma cells (6, 7). It aids wound healing in skin, cornea, and heart following myocardial infarction by promoting re-epithelialization, migration, and collagen deposition (6-10). It binds chemokines, creating chemotactic gradients when shed, but also binds and modulates integrins to control the influx of leukocytes (7, 9, 11). The net effect is to allow, but limit, inflammation. In myeloma and other cancers, shedding of Syndecan-1 can facilitate growth, angiogenesis and metastasis (12-14). Growth factors, such as FGFs and HGF, bind GAG chains and use Syndecan-1 as a coreceptor (14, 15). The GAG chains may also be used by a variety of viruses and bacteria for cell adhesion and uptake (6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.