# Human Syndecan-3 APC-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: FAB3539A
100 TESTS

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human Syndecan-3 in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant mouse Syndecan-3 is observed and less than 1% cross-reactivity with recombinant mouse Syndecan-4 and recombinant human Syndecan-2 is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human Syndecan-3<br>Gln48-Lys383<br>Accession # O75056 |
| **Conjugate** | Allophycocyanin<br>Excitation Wavelength: 620-650 nm<br>Emission Wavelength: 660-670 nm |
| **Formulation** | Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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. |

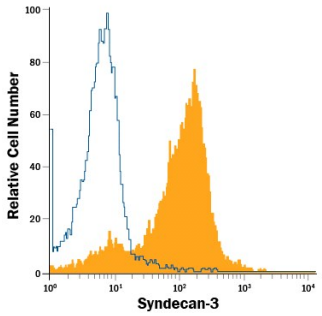
## APPLICATIONS

**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** | 10 µL/$10^6$ cells | See Below |

## DATA

**Flow Cytometry**




**Detection of Syndecan-3 in A172 Human Cell Line by Flow Cytometry.** A172 human glioblastoma cell line was stained with Goat Anti-Human Syndecan-3 APC-conjugated Antigen Affinity-purified Polyclonal Antibody (Catalog # FAB3539A, filled histogram) or isotype control antibody (Catalog # IC108A, open histogram). View our protocol for Staining Membrane-associated Proteins.

## 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.**<br>● 12 months from date of receipt, 2 to 8 °C as supplied. |



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## 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 of 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).

**References:**

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