

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                   |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Tenascin C in direct ELISAs and Western blots.                                            |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                     |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                               |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human Tenascin C<br>Ser186-Pro625<br>Accession # P24821 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 nm                         |
| <b>Formulation</b>                                                                                                                                                                                      | 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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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

## BACKGROUND

Tenascin C, also known as hexabrachion, cytotactin, neuronectin, GMEM, J1, myotendinous antigen, glioma-associated-extracellular matrix antigen, and GP 150-225, is a member of the Tenascin family of extracellular matrix proteins. It is secreted as a disulfide-linked homohexamer whose subunits can vary in size from approximately 200 kDa to over 300 kDa due to differences in glycosylation (1). Rotary-shadowed electron micrographs of the purified molecule show six strands joined to one another at one end in a globular domain with each arm terminating in a knob-like structure (2, 3). The human Tenascin C monomer is synthesized as a precursor with a 22 amino acid (aa) signal sequence and a 2179 aa mature chain. The mature chain consists of a coiled-coil region (aa 118-145), followed by 15 EGF-like domains, 15 fibronectin type-III domains, and a fibrinogen C-terminal domain. In addition, there are 23 potential sites of N-linked glycosylation. Alternative splicing within the fibronectin type-III repeats produces six isoforms for human Tenascin C. Mature human Tenascin C (isoform 1) shares 84% aa sequence identity with mature mouse Tenascin C. In the developing embryo, Tenascin C is expressed during neural, skeletal, and vascular morphogenesis (1, 2). In the adult, it virtually disappears with continued basal expression detectable only in tendon-associated tissues (1, 2). However, great up-regulation in expression occurs in tissues undergoing remodeling processes seen during wound repair and neovascularization or in pathological states such as inflammation or tumorigenesis (1, 4, 5). Biologically, Tenascin C functions as an adhesion-modulatory extracellular matrix protein (1, 4-8). Specifically, it antagonizes the adhesive effects of fibronectin, and impacts the ability of fibroblasts to deposit and contract the matrix by affecting the morphology and signaling pathways of adherent cells (5-7). Tenascin C acts by blocking syndecan-4 binding at the edges of the wound and by suppressing fibronectin-mediated activation of RhoA and focal adhesion kinase (FAK) (4-8). Tenascin C thus promotes epidermal cell migration and proliferation during wound repair.

## PRODUCT SPECIFIC NOTICES

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