

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Tenascin C in direct ELISAs. No cross-reactivity with recombinant human Tenascin R or recombinant mouse Tenascin C is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 391819
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Tenascin C Ser186-Pro625 Accession # NP_002151
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.

Immunocytochemistry 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

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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