

#### DESCRIPTION

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Thrombospondin-1 in direct ELISAs.                                                                                                                                                                                                                            |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 899631R                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from cell culture supernatant                                                                                                                                                                                                                       |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Thrombospondin-1<br>Asn19-Ser1171<br>Accession # P35441                                                                                                                                                               |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<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.

**ELISA** 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

Thrombospondin-1 (TSP-1) is a 150-180 kDa calcium-sensitive protein that is secreted as a disulfide-linked homotrimer. Within the Thrombospondin family, TSP-2 is also homotrimeric, while TSP-3, -4, and -5/COMP are pentameric. TSP-1 regulates a wide range of cellular functions including their interactions with other cells and with the extracellular matrix (ECM). TSP-1 contains an N-terminal Laminin G-like globular domain, an extended central region with one vWF-C domain, 3 TSP type 1 repeats, 3 EGF-like domains, and 8 TSP type-3 repeats, and a globular C-terminal lectin domain. Distinct regions of TSP-1 have been associated with binding to particular ECM or cellular molecules (1, 2). Mature mouse TSP-1 shares 95% and 99% amino acid sequence identity with human and rat TSP-1, respectively. TSP-1 counteracts the angiogenic, hypotensive, and anti-thrombotic effects of nitric oxide (NO) (3). It binds and neutralizes VEGF, blocks VEGF R2 signaling on vascular endothelial cells (EC), and destabilizes adhesive contacts between EC (4-6). TSP-1's actions on vascular smooth muscle cells support arterial tone and blood pressure in the presence of vasodilatory stimulation (7). It is released from activated platelets and enhances platelet aggregation and adhesion (8). TSP-1 also plays an important role in wound repair and tissue fibrosis by binding latent TGF-beta and inducing release of the active cytokine from the latency associated peptide (LAP) (9, 10). TSP-1 dampens adaptive immune responses by inducing the differentiation of regulatory T cells and inhibiting TCR signaling (11, 12). In the nervous system, it promotes excitatory synapse formation (13, 14) and supports the integration of neural progenitor cells into the olfactory bulb (15). In addition, TSP-1 is released by apoptotic cells and promotes macrophage-mediated debris clearance (16).

#### PRODUCT SPECIFIC NOTICES

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