Human Testican 1/SPOCK1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2327

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Testican 1/SPOCK1 in direct ELISAs and Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human (rh) Testican 2 is observed and less than 2% cross-reactivity with rhTestican 3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Testican 1/SPOCK1 Arg22-Trp439 Accession # Q08629
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

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
Western Blot	0.1 µg/mL	Recombinant Human Testican 1/SPOCK1 (Catalog # 2327-PI)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Testican 1/SPOCK1 (Catalog # 2327-PI), see our available Western blot detection antibodies

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Testican 1, encoded by the SPOCK1 gene, is a proteoglycan first identified in human seminal plasma (1). The cDNAs from the human testis and mouse brain indicate 95% identity between the deduced amino acid sequences from the two species, predicting a conserved function (2, 3). Human Testican 1 is able to inhibit attachment of Neuro-2a cells and their ability to form neurite extensions (4). At R&D Systems, rhTestican 1 has also been shown to be able to enhance neurite outgrowth of E18 rat embryonic hippocampal neurons. Testican 1 contains Ca^{2+}-binding domain and the C-terminal acidic domain with putative glycosaminoglycan attachment sites (5). In addition, it contains three potential inhibitory domains targeted toward three different classes of proteases, metallo, cysteine and serine proteases. The N-terminal region, which is unique to testicans, is responsible for the inhibition of testican 1 towards MMP-14 (MT1-MMP, a metalloprotease) activation of MMP-2 (6). The thyropin domain may be responsible for the inhibition of testican 1 towards cathepsin L, a cysteine protease (5). The follistatin-like domain with a six cysteine Kazal-like motif may inhibit serine proteases. The purified rhTestican 1 is capable of inhibiting rhMMP-14 and rhCathepsin L (R&D Systems, Catalog # 918-MP and 952-CY) in assays using the fluorogenic peptide substrates (R&D Systems, Catalog # ES001 and ES008).

References:

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4. Marr, H.S. and C.-J.S Edgell (2003) Matrix Biol. **22**:259.
5. Bocock, J.P. *et al.* (2003) Eur. J. Biochem. **270**:4008.
6. Nakada, M. *et al.* (2001) Cancer Res. **61**:8896.

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