Human Thrombospondin-2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1635

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Thrombospondin-2 in ELISAs and Western blots. In sandwich ELISAs, less than 0.2% cross-reactivity with recombinant human (rh) THBS-1 and rhTHBS-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Thrombospondin-2 Gly19-Ile1172 Accession # P35442
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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 Thrombospondin-2 (Catalog # 1635-T2)
Human Thrombospondin-2 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human Thrombospondin-2 Antibody (Catalog # MAB16351)
ELISA Detection	0.1-0.4 µg/mL	Human Thrombospondin-2 Biotinylated Antibody (Catalog # BAF1635)
Standard		Recombinant Human Thrombospondin-2 (Catalog # 1635-T2)

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

Thrombospondin-2 (TSP-2) is a 150 kDa calcium-binding protein that modulates cellular interactions with extracellular matrix. Thrombospondin-1 and -2 constitute subgroup A thrombospondin family members and form disulfide-linked homotrimers, whereas Thrombospondin-3, -4, and -5/COMP constitute subgroup B and form homopentamers (1-4). The human TSP-2 cDNA encodes a 1172 amino acid (aa) precursor that includes an 18 aa signal sequence followed by an N-terminal heparin-binding domain, an oligomerization motif, one vWF-C domain, three TSP type-1 repeats, three EGF-like repeats, seven TSP type-3 repeats, and a lectin-like TSP C-terminal domain (5). Human TSP-2 shares 88-90% aa sequence identity with bovine, mouse, and rat TSP-2. Within the TSP type-3 repeats and TSP C-terminal domain, human TSP-2 shares 80% aa sequence identity with human TSP-1 and approximately 60% aa sequence identity with human TSP-3, -4, and -5/COMP. TSP-2 regulates collagen matrix formation by altering fibroblast behavior during development and in areas of tissue remodeling in the adult (6, 7). Trimerization of TSP-2 is required for the calcium-dependent cell attachment and spreading functions, while the heparin-binding domain is responsible for the destabilization of focal adhesion sites (8-10). The heparin-binding domain also mediates binding to Integrins α3β1 and α6β1 on microvascular endothelial cells (EC) and Integrin α4β1 on large blood vessel EC (11, 12). A fragment of TSP-2 (heparin-binding domain, oligomerization motif, and vWF-C domain) promotes EC survival, proliferation, and chemotaxis (11). Inclusion of the three TSP type-1 domains results in a molecule that inhibits VEGF-induced EC migration and vascular tube formation (13, 14). *In vivo*, full length TSP-2 blocks tumor angiogenesis and induces vascular EC apoptosis (13, 15). HPRG functions as an apparent decoy receptor by preventing interaction of TSP-2 with CD36 on macrophages and microvasculature EC (14). TSP-2 also binds MMP-2 and facilitates MMP-2 clearance by the scavenger receptor LRP (16).

References:

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