



Thrombospondin (TSP) Ab-1 (Clone A4.1)

Mouse Monoclonal Antibody

Cat. #DLN-09355, DLN-09356, or DLN-09354 (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)

Cat. #DLN-09357 or DLN-09358 (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)

Description: Thrombospondin is a protein from platelet α -granules. It is made up of three identical subunits bound by interchain disulfides. It is secreted at sites of platelet activation and aggregation and is involved in the processes of chemotaxis, adhesion, proliferation and differentiation of leukocytes, fibroblasts, smooth muscle and endothelial cells.

Comments: Ab-1 blocks anti-angiogenic activity of TSP-1 by inhibiting its binding to TSP-Receptor / CD36. It shows no cross-reaction with fibronectin, fibrinogen, and von Willebrand factor. It inhibits the adhesion of human melanoma G361 cells, keratinocytes, squamous carcinoma cells, and rat smooth muscle cells to TSP.¹ It does not inhibit aggregation of thrombin-induced platelets.

Mol. Wt. of Antigen: ~450kDa (non-reduced)

Epitope: N-terminal half of the central stalk-like region of TSP¹ which is recovered as a 50kDa fragment after chymotryptic digestion of TSP.¹

Species Reactivity: Human, Mouse, Rat, Cow, and Chicken. Others-not known

Clone Designation: A4.1

Ig Isotype: IgM

Immunogen: Calcium-replete, native purified human TSP from the supernatant of thrombin-activated platelets

Applications and Suggested Dilutions:

- Blocks Binding of TSP-1 to TSP-Rec. / CD36¹
(Order Ab without azide)
- Flow Cytometry
- Immunofluorescence
- Western Blotting (Ab 1-2µg/ml for 2hrs at RT)
(Non-reduced only) (Ab-11 is better)
- Immunohistology (Not suitable)

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: HUVEC cells.

Cellular Localization: Secretory granules, Golgi complex, endoplasmic reticulum, extracellular matrix

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Supplied As:

200µg/ml antibody purified from ascites fluid by ammonium sulfate precipitation and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml.

Storage and Stability:

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Key References:

Prater CA, *et. al.* J Cell Biol, 1991, 112(5):1031-40.

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. Dianova is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

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Additional Key References:

1. DeFreitas MF; Yoshida CK; Frazier WA; Mendrick DL; Kypta RM; Reichardt LF. Identification of integrin alpha 3 beta 1 as a neuronal thrombospondin receptor mediating neurite outgrowth. *Neuron*, 1995 Aug, 15(2):333-43.
2. RayChaudhury A; Frazier WA; D'Amore PA. Comparison of normal and tumorigenic endothelial cells: differences in thrombospondin production and responses to transforming growth factor-beta. *Journal of Cell Science*, 1994 Jan, 107 (Pt 1):39-46.
3. Tolsma SS; Volpert OV; Good DJ; Frazier WA; Polverini PJ; Bouck N. Peptides derived from two separate domains of the matrix protein thrombospondin-1 have anti-angiogenic activity. *Journal of Cell Biology*, 1993 Jul, 122(2):497-511.
4. Frazier WA. Thrombospondins. *Current Opinion in Cell Biology*, 1991 Oct, 3(5):792-9.
5. Prater CA; Plotkin J; Jaye D; Frazier WA. The properdin-like type I repeats of human thrombospondin contain a cell attachment site. *Journal of Cell Biology*, 1991 Mar, 112(5):1031-40.
6. Good DJ; Polverini PJ; Rastinejad F; Le Beau MM; Lemons RS; Frazier WA; Bouck NP. A tumor suppressor-dependent inhibitor of angiogenesis is immunologically and functionally indistinguishable from a fragment of thrombospondin. *Proceedings of the National Academy of Sciences of the United States of America*, 1990 Sep, 87(17):6624-8.
7. Frazier WA. Thrombospondin: a modular adhesive glycoprotein of platelets and nucleated cells. *Journal of Cell Biology*, 1987 Aug, 105(2):625-32.
8. Santoro SA; Frazier WA. Isolation and characterization of thrombospondin. *Methods in Enzymology*, 1987, 144:438-46.

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