

Mouse Monoclonal Antibody to THBS1
Purified Mouse Monoclonal Antibody
Catalog # AO2467a

Specification

Mouse Monoclonal Antibody to THBS1 - Product Information

Application	E, WB, FC
Primary Accession	P07996
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	129kDa KDa

Description

The protein encoded by this gene is a subunit of a disulfide-linked homotrimeric protein. This protein is an adhesive glycoprotein that mediates cell-to-cell and cell-to-matrix interactions. This protein can bind to fibrinogen, fibronectin, laminin, type V collagen and integrins alpha-V/beta-1. This protein has been shown to play roles in platelet aggregation, angiogenesis, and tumorigenesis. ;

Immunogen

Purified recombinant fragment of human THBS1 (AA: 750-850) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

Application Note

ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

Mouse Monoclonal Antibody to THBS1 - Additional Information

Gene ID 7057

Other Names

TSP; THBS; TSP1; TSP-1; THBS-1

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Mouse Monoclonal Antibody to THBS1 is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Monoclonal Antibody to THBS1 - Protein Information

Name THBS1 ([HGNC:11785](#))

Synonyms TSP, TSP1

Function

Adhesive glycoprotein that mediates cell-to-cell and cell-to-matrix interactions (PubMed: [15014436](http://www.uniprot.org/citations/15014436), PubMed: [18285447](http://www.uniprot.org/citations/18285447), PubMed: [2430973](http://www.uniprot.org/citations/2430973), PubMed: [6489349](http://www.uniprot.org/citations/6489349)). Multifunctional, involved in inflammation, angiogenesis, wound healing, reactive oxygen species (ROS) signaling, nitric oxide (NO) signaling, apoptosis, senescence, aging, cellular self-renewal, stemness, and cardiovascular and metabolic homeostasis (PubMed: [10613822](http://www.uniprot.org/citations/10613822), PubMed: [11134179](http://www.uniprot.org/citations/11134179), PubMed: [1371676](http://www.uniprot.org/citations/1371676), PubMed: [14568985](http://www.uniprot.org/citations/14568985), PubMed: [24511121](http://www.uniprot.org/citations/24511121), PubMed: [29042481](http://www.uniprot.org/citations/29042481), PubMed: [32679764](http://www.uniprot.org/citations/32679764)). Negatively modulates dendritic cell activation and cytokine release, as part of an autocrine feedback loop, contributing to the resolution of inflammation and immune homeostasis (PubMed: [14568985](http://www.uniprot.org/citations/14568985)). Ligand for receptor CD47 (PubMed: [19004835](http://www.uniprot.org/citations/19004835), PubMed: [8550562](http://www.uniprot.org/citations/8550562)). Modulates nitric oxide (NO) signaling via CD47, hence playing a role as a pressor agent, supporting blood pressure (By similarity). Plays a role in endothelial cell senescence, acting via CD47, by increasing the abundance and activation of NADPH oxidase NOX1, and so generating excess ROS (PubMed: [29042481](http://www.uniprot.org/citations/29042481)). Inhibits stem cell self-renewal, acting via CD47 signaling, probably by regulation of the stem cell transcription factors POU5F1/OCT4, SOX2, MYC/c-Myc and KLF4 (By similarity). Negatively modulates wound healing, acting via CD47 (By similarity). Ligand for receptor CD36 (PubMed: [10613822](http://www.uniprot.org/citations/10613822), PubMed: [11134179](http://www.uniprot.org/citations/11134179), PubMed: [1371676](http://www.uniprot.org/citations/1371676)). Involved in inducing apoptosis in podocytes in response to elevated free fatty acids, acting via CD36 (By similarity). Plays a role in suppressing angiogenesis, acting, depending on context, via CD36 or CD47 (PubMed: [10613822](http://www.uniprot.org/citations/10613822), PubMed: [11134179](http://www.uniprot.org/citations/11134179), PubMed: [1371676](http://www.uniprot.org/citations/1371676), PubMed: [32679764](http://www.uniprot.org/citations/32679764)). Promotes cellular senescence in a TP53-CDKN1A-RB1 signaling-dependent manner (PubMed: [29042481](http://www.uniprot.org/citations/29042481)). Ligand for immunoglobulin-like cell surface receptor SIRPA (PubMed: [24511121](http://www.uniprot.org/citations/24511121)). Involved in ROS signaling in non-phagocytic cells, stimulating NADPH oxidase-derived ROS production, acting via interaction with SIRPA (PubMed: [24511121](http://www.uniprot.org/citations/24511121)). Plays a role in metabolic dysfunction in diet-induced obesity, perhaps acting by exacerbating adipose inflammatory activity; its effects may be mediated, at least in part, through enhanced adipocyte proliferation (By similarity). Plays a role in ER stress response, via its interaction with the activating transcription factor 6 alpha (ATF6) which produces adaptive ER stress response factors (By similarity). May be involved in age-related conditions, including metabolic dysregulation, during normal aging (PubMed: [29042481](http://www.uniprot.org/citations/29042481), PubMed: [32679764](http://www.uniprot.org/citations/32679764)).

Cellular Location

Secreted. Cell surface. Secreted, extracellular space, extracellular matrix. Endoplasmic reticulum {ECO:0000250|UniProtKB:P35441}. Sarcoplasmic reticulum {ECO:0000250|UniProtKB:P35441}. Note=Secreted by thrombin-activated platelets and binds to the cell surface in the presence of extracellular Ca(2+) (PubMed:101549, PubMed:6777381). Incorporated into the extracellular matrix (ECM) of fibroblasts (PubMed:6341993). The C- terminal region in trimeric form is required for retention in the ECM (PubMed:18285447). Also detected in the endoplasmic reticulum and sarcoplasmic reticulum where it plays a role in the ER stress response (By similarity). {ECO:0000250|UniProtKB:P35441, ECO:0000269|PubMed:6341993, ECO:0000269|PubMed:6777381}

Tissue Location

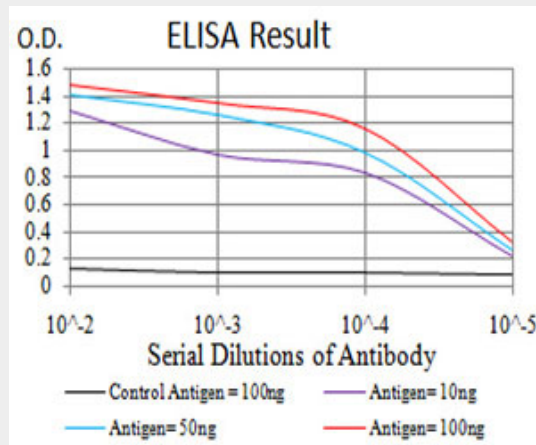
Expressed by platelets (at protein level) (PubMed:101549). Expressed by monocyte-derived immature and mature dendritic cells (at protein level) (PubMed:14568985)

Mouse Monoclonal Antibody to THBS1 - Protocols

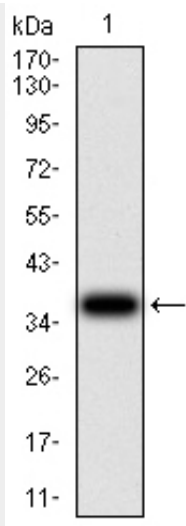
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

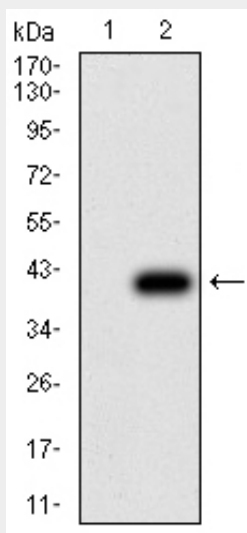
Mouse Monoclonal Antibody to THBS1 - Images



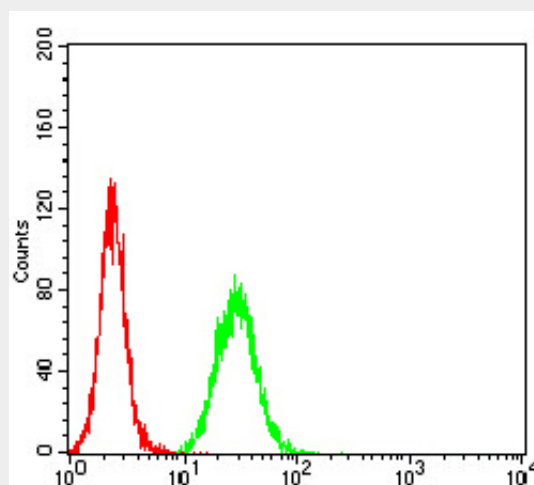
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



Western blot analysis using THBS1 mAb against human THBS1 (AA: 750-850) recombinant protein. (Expected MW is 37.3 kDa)



Western blot analysis using THBS1 mAb against HEK293 (1) and THBS1 (AA: 750-850)-hIgGFc transfected HEK293 (2) cell lysate.



Flow cytometric analysis of HeLa cells using THBS1 mouse mAb (green) and negative control

(red).

Mouse Monoclonal Antibody to THBS1 - References

1. Ren Fail. 2015 Jul;37(6):1039-43. ; 2. Int J Cardiol. 2013 Sep 30;168(2):692-706.;