

# Mouse Monoclonal Antibody to THBS1

Purified Mouse Monoclonal Antibody

Catalog # AO2467a

## Product Information

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<b>Application</b>	WB, FC, E
<b>Primary Accession</b>	<a href="#">P07996</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	5E2E2
<b>Isotype</b>	Mouse IgG1
<b>Calculated MW</b>	129383
<b>Description</b>	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. ;
<b>Immunogen</b>	Purified recombinant fragment of human THBS1 (AA: 750-850) expressed in E. Coli.
<b>Formulation</b>	Purified antibody in PBS with 0.05% sodium azide
<b>Application Note</b>	ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

## Additional Information

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<b>Gene ID</b>	7057
<b>Other Names</b>	TSP; THBS; TSP1; TSP-1; THBS-1
<b>Dilution</b>	WB~~1:1000 FC~~1:10~50 E~~N/A
<b>Storage</b>	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.
<b>Precautions</b>	Mouse Monoclonal Antibody to THBS1 is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	THBS1 ( <a href="#">HGNC:11785</a> )
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**Synonyms**

TSP, TSP1

**Function**

Adhesive glycoprotein that mediates cell-to-cell and cell-to-matrix interactions (PubMed:[15014436](#), PubMed:[18285447](#), PubMed:[2430973](#), PubMed:[6489349](#)). Multifunctional, involved in inflammation, angiogenesis, wound healing, reactive oxygen species (ROS) signaling, nitrous oxide (NO) signaling, apoptosis, senescence, aging, cellular self-renewal, stemness, and cardiovascular and metabolic homeostasis (PubMed:[10613822](#), PubMed:[11134179](#), PubMed:[1371676](#), PubMed:[14568985](#), PubMed:[24511121](#), PubMed:[29042481](#), PubMed:[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](#)). Ligand for receptor CD47 (PubMed:[19004835](#), PubMed:[8550562](#)). Modulates nitrous 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](#)). 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](#), PubMed:[11134179](#), PubMed:[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](#), PubMed:[11134179](#), PubMed:[1371676](#), PubMed:[32679764](#)). Promotes cellular senescence in a TP53-CDKN1A-RB1 signaling-dependent manner (PubMed:[29042481](#)). Ligand for immunoglobulin-like cell surface receptor SIRPA (PubMed:[24511121](#)). Involved in ROS signaling in non-phagocytic cells, stimulating NADPH oxidase-derived ROS production, acting via interaction with SIRPA (PubMed:[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](#), PubMed:[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}

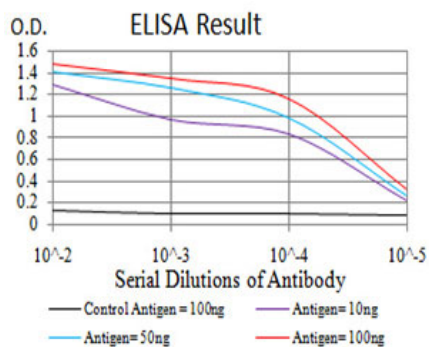
**Tissue Location**

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

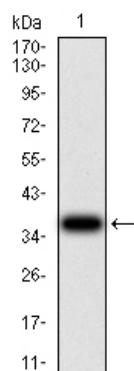
**References**

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

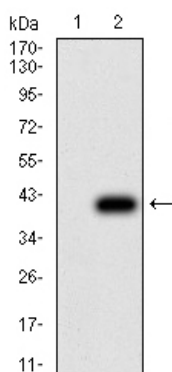
## Images



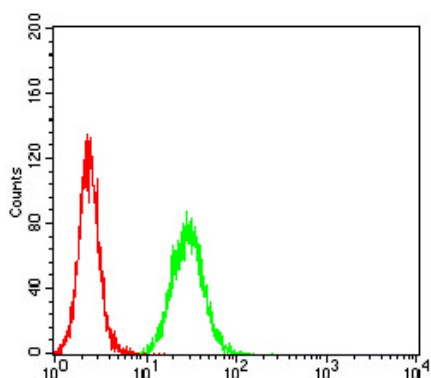
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.