

THBS1 Antibody (Center)
Mouse Monoclonal Antibody (Mab)
Catalog # AM2131b

Specification

THBS1 Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P07996
Other Accession	P35448 , P35441 , Q28178 , NP_003237.2
Reactivity	Human
Predicted	Bovine, Mouse, Xenopus
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Antigen Region	763-789

THBS1 Antibody (Center) - Additional Information

Gene ID 7057

Other Names

Thrombospondin-1, THBS1, TSP, TSP1

Target/Specificity

This THBS1 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 763-789 amino acids from the Central region of human THBS1.

Dilution

WB~~1:500~1000

E~~Use at an assay dependent concentration.

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Euglobin precipitation followed by dialysis against PBS.

Storage

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

Precautions

THBS1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

THBS1 Antibody (Center) - Protein Information

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

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)

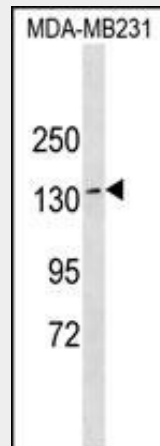
THBS1 Antibody (Center) - Protocols

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](#)

THBS1 Antibody (Center) - Images



THBS1 Antibody (Center)(Cat. #AM2131b) western blot analysis in MDA-MB231 cell line lysates (35µg/lane). This demonstrates the THBS1 antibody detected the THBS1 protein (arrow).

THBS1 Antibody (Center) - Background

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.

THBS1 Antibody (Center) - References

- Zhou, L., et al. *Cancer Res.* 70(20):8199-8210(2010)
Romero, R., et al. *Am. J. Obstet. Gynecol.* 203 (4), 361 (2010) :
Bailey, S.D., et al. *Diabetes Care* 33(10):2250-2253(2010)
Nucera, C., et al. *Proc. Natl. Acad. Sci. U.S.A.* 107(23):10649-10654(2010)
Gustavsson, H., et al. *BMC Cancer* 10, 288 (2010) :