

THBS1 Antibody (Center)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2131b

Specification

THBS1 Antibody (Center) - Product Information

Application WB,E
Primary Accession P07996

Other Accession <u>P35448</u>, <u>P35441</u>, <u>Q28178</u>, <u>NP 003237.2</u>

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: <u>1371676</u>, PubMed: <u>14568985</u>, PubMed: <u>24511121</u>, PubMed: <u>29042481</u>, PubMed: <u>32679764</u>). 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

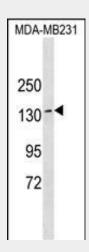
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety



• 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):