10320 Camino Santa Fe, Suite G
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TSP1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10223

Specification

TSP1 Antibody - Product Information

Application	**WB**
Primary Accession	P07996
Reactivity	**Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**129383**

TSP1 Antibody - Additional Information

Gene ID 7057

Positive Control	**TSP-1 purified protein**
Application & Usage	**Western blot: 1:200 (This information is only intended as a guide. The optimal dilutions must be determined by the user.)**

Other Names
Thrombospondin-1

Target/Specificity
TSP1

Antibody Form
Liquid

Appearance
Colourless liquid

Formulation
100 µg (0.5 mg/ml) of antibody in PBS, 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol, pH 7.2

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TSP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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TSP1 Antibody - 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:<a href="http://www.uniprot.org/citations/29042481"

target="_blank">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)

TSP1 Antibody - 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

TSP1 Antibody - Images

TSP1 Antibody - Background

Thrombospondin-1 is believed to play a role in cell migration and proliferation, during embryogenesis and wound repair. It has also been used as a potential regulator of tumor growth and metastasis. TSP expression is highly regulated by different hormones and cytokines and is developmentally controlled. TSP stimulates the growth of vascular smooth muscle cells and human foreskin fibroblasts. A combination of IFN-gamma and TNF-alpha inhibits TSP production in these cells.