

**THBS1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8522a****Specification**

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**THBS1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [P07996](#)**THBS1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 7057**Other Names**

Thrombospondin-1, THBS1, TSP, TSP1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8522a](/products/AP8522a) was selected from the N-term region of human THBS1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**THBS1 Antibody (N-term) Blocking Peptide - Protein Information****Name** THBS1 ([HGNC:11785](#))**Synonyms** TSP, TSP1**Function**

Adhesive glycoprotein that mediates cell-to-cell and cell-to-matrix interactions (PubMed: [2430973](http://www.uniprot.org/citations/2430973), PubMed: [6489349](http://www.uniprot.org/citations/6489349), PubMed: [15014436](http://www.uniprot.org/citations/15014436), PubMed: [18285447](http://www.uniprot.org/citations/18285447)).

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: [14568985](http://www.uniprot.org/citations/14568985), PubMed: [1371676](http://www.uniprot.org/citations/1371676), PubMed: [1371676](http://www.uniprot.org/citations/1371676)).

[10613822](http://www.uniprot.org/citations/10613822), PubMed: [11134179](http://www.uniprot.org/citations/11134179), 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: [8550562](http://www.uniprot.org/citations/8550562), PubMed: [19004835](http://www.uniprot.org/citations/19004835)). 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](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: [1371676](http://www.uniprot.org/citations/1371676), PubMed: [10613822](http://www.uniprot.org/citations/10613822), PubMed: [11134179](http://www.uniprot.org/citations/11134179)). 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: [1371676](http://www.uniprot.org/citations/1371676), PubMed: [10613822](http://www.uniprot.org/citations/10613822), PubMed: [32679764](http://www.uniprot.org/citations/32679764), PubMed: [11134179](http://www.uniprot.org/citations/11134179)). Promotes cellular senescence in a TP53-CDKN1A-RB1 signaling-dependent manner (PubMed: [29042481](http://www.uniprot.org/citations/29042481), 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:6777381, PubMed:101549). 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 (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**THBS1 Antibody (N-term) Blocking Peptide - Images****THBS1 Antibody (N-term) Blocking Peptide - Background**

THBS1 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 (N-term) Blocking Peptide - References**

Hofsteenge, J., et.al., J. Biol. Chem. 276 (9), 6485-6498 (2001) Roszmusz, E., et.al., Biochem. Biophys. Res. Commun. 296 (1), 156-160 (2002)