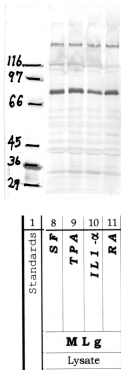
Anti-ADAMTS16 Rabbit Polyclonal Antibody

A disintegrin and metalloproteinase with thrombospondin motifs 16, ADAM-TS 16, ADAM-TS16, ADAMTS-16, EC 3.4.24.-,

Gene: ADAMTS16 **UniProt:** Q8TE57 **Host:** Rabbit **Clonality:** Polyclonal (pAb)

Product Image



Propeptide domain
RP1ADAMTS16

— Western Blot (1-panel validation)

Actual Western blot validation for anti-ADAMTS16 rabbit polyclonal antibody. 1-panel validation across domain-specific antibody clones — each panel labeled with its catalog number and target domain. Reducing conditions; 10–20 µg/lane on 7.5–10% SDS-PAGE.

Key Product Facts

Supplier	Triple Point Biologics, Inc. (Sudbury, Ontario, Canada)
Product Name	Anti-ADAMTS16 Rabbit Polyclonal Antibody
Gene Symbol	ADAMTS16
Alternative Names	A disintegrin and metalloproteinase with thrombospondin motifs 16, ADAM-TS 16, ADAM-TS16, ADAMTS-16, EC 3.4.24.-,
UniProt ID	Q8TE57
Host Species	Rabbit
Clonality	Polyclonal (pAb)
Isotype	IgG
Concentration	1mg/ml
Purity	Affinity purified
Pack Size	100ug
Validated Application	WB
Recommended Dilution	WB-1/1000
Species Reactivity	Validated- Human Potential-Mouse, Pan, Monkey, Dog
Immunogen Type	Synthetic Peptide from Uniprot Sequence
Conjugation	none
Buffer / Preservatives	Sodium Chloride 500 mM, Sodium Phosphate 10 mM, Potassium Phosphate 1.8 mM, Potassium Chloride 2.7 mM, Glycerol 50% (v/v)
Website	triplepointbiologics.com/anti-adamts-16-rabbit-polyclonal-antibody

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of ADAMTS16. Each variant is directed at a specific structural region of the protein. Exact peptide sequences are proprietary; each variant is validated for the applications listed.

Domain / Variant	Epitope Region (approx. residues)	Cat. No.	Availability

Propeptide domain	**25–279** Region within the propeptide domain of human ADAMTS16, N-terminal to the catalytic metalloproteinase domain; this region maintains zymogen latency via the cysteine-switch mechanism and is removed by furin-type convertases during activation	RP1ADAMTS16	In catalog
Metalloproteinase domain	**290–495** Region within the catalytic metalloproteinase domain of human ADAMTS16, encompassing the zinc-binding HEXXH motif and adjacent substrate-binding subsites; this domain is retained in the active secreted protease following propeptide removal	RP2ADAMTS16	In catalog
—	**280–1224** Multi-domain immunogen spanning from the propeptide through the disintegrin-like and first thrombospondin type-1 repeat region of human ADAMTS16, providing epitope coverage across the N-terminal functional core of the precursor protein	RP-ADAMTS16	In catalog

Applications & Recommended Dilutions

App.	Species	Dilution Range	Notes
WB	Validated-Human Potential-Mouse, Pan, Monkey, Dog	1:1000	Optimal dilution should be determined per laboratory and lot.

Optimal dilutions should be determined by each laboratory for each application. Triple Point Biologics antibodies include a peptide-neutralized negative control aliquot for specific-signal confirmation.

Storage & Handling

Short-term Storage	+4°C (1–2 weeks)
Long-term Storage	Aliquot and store at -20°C
Shipping Conditions	Shipped in styrofoam cooler on blue ice
Hazard Warning	Product may contain Sodium Azide — POISONOUS AND HAZARDOUS. Handle by trained personnel only.
Shelf Life	12 months from date of receipt under recommended conditions

Target Background

Family & Structural Architecture

ADAMTS16 is a secreted zinc-dependent metalloproteinase belonging to the ADAMTS (a disintegrin and metalloproteinase with thrombospondin motifs) family, which comprises 19 members in humans. Like all ADAMTS proteases, ADAMTS16 is organised in a modular fashion: an N-terminal signal peptide, a propeptide that maintains latency, a catalytic metalloproteinase domain housing the zinc-binding HEXXH motif, a disintegrin-like domain, a central thrombospondin type-1 repeat (TSR), a cysteine-rich domain, a spacer region, and additional C-terminal TSRs. This multi-domain architecture is characteristic of matrix-remodelling ADAMTS members and underpins substrate recognition in the pericellular space.

Expression & Localisation

ADAMTS16 mRNA is expressed in a relatively restricted pattern compared with ubiquitous ADAMTS family members. Appreciable transcript levels have been detected in the kidney, lung, ovary, and placenta, with lower expression in several other tissues. At the protein level, ADAMTS16 is secreted into the extracellular matrix and pericellular environment, consistent with the absence of a transmembrane anchor. Within tissues, ADAMTS16 associates with the matrix through its TSR and spacer domains, positioning the enzyme close to its matrix substrates and to cell-surface receptors that modulate its activity.

Activation & Regulation

ADAMTS16 is synthesised as a zymogen; the propeptide domain maintains catalytic latency through coordination of the active-site zinc by a conserved cysteine residue (cysteine-switch mechanism). Removal of the propeptide by furin-type proprotein convertases in the trans-Golgi network or at the cell surface is required for activation, a processing step conserved across the ADAMTS family. Post-secretion activity is modulated by tissue inhibitors of metalloproteinases (TIMPs), particularly TIMP-3, which is a broad-spectrum inhibitor of secreted ADAMTS members. Heparan sulfate proteoglycans on the cell surface and in the matrix also regulate localisation and activity.

Key Substrates & ECM Remodelling

The substrate repertoire of ADAMTS16 is not yet fully defined. Structural homology to the aggrecanase subgroup (ADAMTS4/5) and to ADAMTS9 and ADAMTS20 suggests the capacity to cleave large aggregating proteoglycans such as aggrecan and versican, though direct biochemical confirmation for ADAMTS16 remains limited. Fibulin-1 has been reported as a matrix substrate relevant to developmental and fibrotic contexts. Regardless of the precise substrate profile, ADAMTS16-mediated proteolysis contributes to extracellular matrix turnover, influencing growth factor sequestration, cell–matrix adhesion, and the availability of cryptic matrix-derived signalling fragments.

Disease Relevance: Fibrosis & Renal Pathology

ADAMTS16 has been implicated in the regulation of TGF-β signalling in the context of renal fibrosis. Elevated ADAMTS16 expression has been observed in fibrotic kidney tissue, where it appears to promote activation of the TGF-β/Smad pathway and downstream pro-fibrotic gene programmes. These findings position ADAMTS16 as a candidate driver of chronic kidney disease progression, acting through matrix remodelling events that amplify TGF-β bioavailability. The protease is also under investigation in the context of organ fibrosis more broadly, including pulmonary fibrosis, where aberrant extracellular matrix turnover is a central pathological mechanism.

Disease Relevance: Cancer & Epithelial–Mesenchymal Transition

In oncological settings, ADAMTS16 has been associated with epithelial–mesenchymal transition (EMT) and tumour cell invasiveness, particularly in lung adenocarcinoma. Upregulation of ADAMTS16 correlates with increased migratory and invasive capacity of tumour cells, consistent with a role in remodelling the tumour microenvironment to facilitate metastasis. The mechanistic link involves modulation of TGF-β pathway activity and downstream EMT transcription factors. Collectively, the available evidence identifies ADAMTS16 as a matrix protease with pathophysiological relevance in both fibrotic and malignant disease, making it a tractable target for antibody-based studies in tissue sections and cell lysates.

Gene & Protein Reference

Gene Symbol	ADAMTS16
HGNC	HGNC:15442
NCBI Gene ID (Human)	170690
NCBI Gene ID (Mouse)	235611
Ensembl	ENSG00000197376
OMIM	607512
UniProt (Human)	Q8TE57
UniProt (Mouse)	Q6S9I1
Protein Family	ADAMTS family; secreted zinc-dependent metalloproteinase
Predicted MW	~136 kDa (full-length precursor); processed forms lower
Observed MW	~130–140 kDa (unreduced); multiple processed bands may be observed
Chromosome	5p15.1 (human)
Paralogue	ADAMTS9, ADAMTS20 (most closely related ADAMTS subgroup members)
Key Substrates	Fibulin-1 (reported); aggrecan and versican (predicted by homology); extracellular matrix proteoglycans
Activated by	Furin-type proprotein convertases (propeptide removal); pericellular protease cascades
Inhibited by	TIMP-3 (primary broad-spectrum inhibitor of secreted ADAMTS members); heparan sulfate proteoglycans (localisation/activity modulation)

About Triple Point Biologics

With over 30 years dedicated to antibody production, Triple Point Biologics is a Canadian company and the premier resource for proteinase and proteinase inhibitor research. Products have been cited in thousands of peer-reviewed publications.

The domain-specific antibody strategy — available in standard, ATK, SPA, and GSK kit formats — delivers predefined epitopes, built-in peptide-neutralized negative controls, and superior specificity for Western blot.

Website: www.triplepointbiologics.com

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Product specifications subject to change. Contact Triple Point Biologics for current product and availability information.