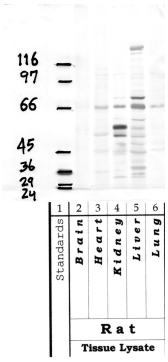
Anti-ADAMTS15 Rabbit Polyclonal Antibody

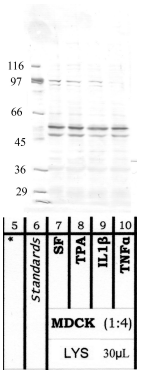
A disintegrin and metalloproteinase with thrombospondin motifs 15, ADAM-TS 15, ADAM-TS15, ADAMTS-15, EC 3.4.24.-,

Gene: ADAMTS15 **UniProt:** Q8TE58 **Host:** Rabbit **Clonality:** Polyclonal (pAb)

Product Image



Propeptide domain
RP1ADAMTS15



Metalloproteinase domain
RP2ADAMTS15

— Western Blot (2-panel validation across domain-specific antibody clones)

Actual Western blot validation for anti-ADAMTS15 rabbit polyclonal antibody. 2-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-ADAMTS15 Rabbit Polyclonal Antibody
Gene Symbol	ADAMTS15
Alternative Names	A disintegrin and metalloproteinase with thrombospondin motifs 15, ADAM-TS 15, ADAM-TS15, ADAMTS-15, EC 3.4.24.-,
UniProt ID	Q8TE58
Host Species	Rabbit
Clonality	Polyclonal (pAb)
Isotype	IgG
Concentration	1mg/ml
Purity	Affinity purified
Pack Size	100ug
Validated Application	IHC, IF, WB
Recommended Dilution	WB-1/1000
Species Reactivity	Validated- Human Potential-Mouse, Rat, 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-15-rabbit-polyclonal-antibody

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of ADAMTS15. 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	**18–212** Region within the N-terminal prodomain of human ADAMTS15, which maintains zymogen latency via a cysteine-switch mechanism and is removed by furin-type convertases during intracellular processing; this domain is absent from the mature, secreted proteinase	RP1ADAMTS15	In catalog
Metalloproteinase domain	**218–427** Region within the catalytic metalloproteinase domain of human ADAMTS15, encompassing the conserved HExxHxxGxxH zinc-binding motif and the Met-turn, which together coordinate the catalytic zinc ion and define the substrate-binding cleft responsible for versican cleavage	RP2ADAMTS15	In catalog
—	**213–950** Broad region spanning multiple domains of human ADAMTS15, including elements of the prodomain, metalloproteinase domain, disintegrin-like module, cysteine-rich region, spacer domain, and C-terminal thrombospondin type-1 repeats, providing reactivity across the full-length protein architecture	RP-ADAMTS15	In catalog

Applications & Recommended Dilutions

App.	Species	Dilution Range	Notes
WB	Validated-Human Potential-Mouse, Rat, 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 & General Biology

ADAMTS15 is a member of the ADAMTS (a disintegrin and metalloproteinase with thrombospondin motifs) family of secreted, zinc-dependent metalloproteinases. The human ADAMTS family comprises 19 members that share a conserved multidomain architecture: a prodomain, a catalytic metalloproteinase domain, a disintegrin-like module, a central thrombospondin type-1 repeat (TSR), a cysteine-rich region, a spacer domain, and a variable number of additional C-terminal TSRs. ADAMTS15 carries two C-terminal TSRs and is classified among the versican-cleaving aggrecanase-like proteases, though it is phylogenetically and functionally distinct from the canonical aggrecanases ADAMTS4 and ADAMTS5.

Expression & Localisation

ADAMTS15 is secreted into the extracellular space, where it associates with the pericellular and interstitial matrix. At the transcript level, ADAMTS15 is broadly expressed in human tissues, with notable expression in skeletal muscle, heart, placenta, and several adult organs. Protein-level studies confirm its presence in the extracellular matrix surrounding myoblasts during myogenic differentiation. Expression is dynamically regulated during tissue remodeling events, including muscle development and post-injury regeneration, suggesting context-dependent transcriptional or post-transcriptional control of its deposition into the matrix compartment.

Activation Mechanism & Prodomain

Like other ADAMTS family members, ADAMTS15 is synthesized as a zymogen bearing an N-terminal prodomain that maintains latency through coordination of the catalytic zinc ion via a conserved cysteine-switch mechanism. Activation requires proteolytic removal of the prodomain, a step accomplished by furin-type proprotein convertases acting on a consensus RXXR cleavage motif within the Golgi compartment prior to secretion. The mature, active proteinase is then released into the extracellular environment. Autocatalytic processing or additional extracellular trimming may further modulate activity, consistent with observations for related ADAMTS proteases.

Key Substrates & Proteolytic Specificity

The best-characterised substrate of ADAMTS15 is versican (VCAN), a large chondroitin sulfate proteoglycan that constitutes a major component of the pericellular matrix. ADAMTS15 cleaves versican at the Glu^{1}■^{2}■↓Ala^{1}■^{2}■ bond within the GAGβ domain, generating the N-terminal versican fragment DPEAAE-versican, a cleavage product detectable with neoepitope antibodies. This versicanse activity remodels the bulky pericellular coat surrounding muscle progenitor cells, reducing steric barriers to membrane apposition and thereby facilitating myoblast fusion into multinucleated myotubes. Whether ADAMTS15 targets additional matrix substrates under physiological or pathological conditions remains an active area of investigation.

Role in Myogenesis & Muscle Repair

Versican clearance from the pericellular space is a prerequisite for productive myoblast fusion during both embryonic skeletal muscle development and adult muscle regeneration following injury. ADAMTS15 contributes to this process alongside other versican-cleaving proteases. Loss of ADAMTS15 activity in experimental models impairs myoblast fusion and delays muscle repair, underscoring its non-redundant role in the myogenic program. The enzyme is therefore studied in contexts such as muscular dystrophy, sarcopenia, and the response of satellite cells to mechanical or ischemic injury, where matrix remodeling efficiency directly governs regenerative outcome.

Disease Relevance

Beyond myogenesis, ADAMTS15 has been implicated in vascular biology and cancer. Proteomic analyses of human plasma have identified ADAMTS15 as a circulating protein associated with smoking-related abdominal aortic aneurysm, consistent with its matrix-remodeling activity in vascular wall homeostasis. In oncology, ADAMTS15 has been reported as a candidate tumour suppressor in breast and colorectal cancers, where reduced expression or promoter hypermethylation correlates with increased invasiveness and poor prognosis. These findings position ADAMTS15 as a biologically relevant protease in both connective tissue homeostasis and disease states characterised by dysregulated extracellular matrix turnover.

Gene & Protein Reference

Gene Symbol	ADAMTS15
HGNC	ADAMTS15
NCBI Gene ID (Human)	170689
NCBI Gene ID (Mouse)	235130
Ensembl	ENSG00000166033
OMIM	607509
UniProt (Human)	Q8TE58
UniProt (Mouse)	Q69ZK4
Protein Family	ADAMTS family; versican-cleaving (VCAN-cleaving) subgroup
Predicted MW	~105 kDa (pro-form); ~95 kDa (mature)
Observed MW	~100–120 kDa (variable by glycosylation state; Western blot)
Chromosome	11q24.3
Paralogue	ADAMTS1, ADAMTS4, ADAMTS5, ADAMTS8, ADAMTS9, ADAMTS20
Key Substrates	Versican (VCAN; cleavage at Glu¹■²■↓Ala¹■²■)
Activated by	Furin-type proprotein convertases (intracellular, Golgi); extracellular protease trimming
Inhibited by	TIMP-3 (predicted, based on family member data); broad-spectrum metalloprotease inhibitors (e.g., EDTA, 1,10-phenanthroline)

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.