

# Anti-ADAMTS20 Rabbit Polyclonal Antibody

A disintegrin and metalloproteinase with thrombospondin motifs 20, ADAM-TS 20, ADAM-TS20, ADAMTS-20, EC 3.4.24.-,

**Gene:** ADAMTS20 **UniProt:** P59510 **Host:** Rabbit **Clonality:** Polyclonal (pAb)

## Product Image

Image placeholder — Western Blot

### — Western Blot

*Suggested image: Western blot of relevant cell or tissue lysates under reducing conditions, probed with the domain-specific antibody. Include a positive-control lane and empty-vector or knockout negative control. Loading: 10–20 µg/lane on 7.5–10% SDS-PAGE.*

Key Product Facts

|                        |                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Supplier               | Triple Point Biologics, Inc. (Sudbury, Ontario, Canada)                                                                   |
| Product Name           | Anti-ADAMTS20 Rabbit Polyclonal Antibody                                                                                  |
| Gene Symbol            | ADAMTS20                                                                                                                  |
| Alternative Names      | A disintegrin and metalloproteinase with thrombospondin motifs 20, ADAM-TS 20, ADAM-TS20, ADAMTS-20, EC 3.4.24.-,         |
| UniProt ID             | P59510                                                                                                                    |
| 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-Rat, Monkey                                                                                    |
| 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-20-rabbit-polyclonal-antibody                                                        |

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of ADAMTS20. 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 |
|------------------|-----------------------------------|----------|--------------|
|------------------|-----------------------------------|----------|--------------|

|                               |                                                                                                                                                                                                                                                                                                               |             |            |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| Metalloproteinase domain      | <b>259–467</b><br>Region within the catalytic metalloproteinase domain of human ADAMTS20, encompassing the conserved zinc-binding HExxHxxGxxH motif and the metzincin Met-turn, situated between the N-terminal propeptide and the downstream disintegrin-like domain                                         | RP1ADAMTS20 | In catalog |
| Carboxyterminal end long form | <b>1860–1910</b><br>Region within the C-terminal GON domain of human ADAMTS20, located distal to the multiple thrombospondin type-1 repeats and representing the defining feature of the long-form ADAMTS subgroup, associated with ER-to-Golgi cargo transport functions independent of proteolytic activity | RP2ADAMTS20 | In catalog |
| —                             | <b>254–1910</b><br>Broad region spanning from the metalloproteinase domain through the disintegrin-like domain, thrombospondin type-1 repeats, cysteine-rich spacer, and C-terminal GON domain of human ADAMTS20, suitable for detection of full-length or partially processed forms of the protein           | RP-ADAMTS20 | In catalog |

## Applications & Recommended Dilutions

| App. | Species                                     | Dilution Range | Notes                                                         |
|------|---------------------------------------------|----------------|---------------------------------------------------------------|
| WB   | Validated-Human<br>Potential-Rat,<br>Monkey | 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

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

## Target Background

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### Family & General Biology

ADAMTS20 is a secreted, zinc-dependent metalloprotease belonging to the ADAMTS (A Disintegrin And Metalloproteinase with Thrombospondin motifs) superfamily. The human protein spans 1,910 amino acids and contains the canonical ADAMTS domain architecture: a signal peptide, propeptide, metalloproteinase domain, disintegrin-like domain, thrombospondin type-1 repeat (TSR), cysteine-rich domain, spacer region, and multiple additional TSRs toward the C-terminus. Like other long-form ADAMTS members, ADAMTS20 also harbours a GON domain at its C-terminal end, a feature shared with ADAMTS9 and implicated in intracellular trafficking functions distinct from proteolysis.

### Expression & Localisation

ADAMTS20 is expressed in a restricted, developmentally regulated pattern. Transcript and protein have been detected in melanoblasts and neural crest-derived cell populations during embryogenesis, consistent with roles in pigment cell development. In adult tissues, expression is comparatively low and tissue-specific, with reports of localisation to the extracellular matrix and pericellular space. The secreted protease is processed and deposited within the ECM, where it can act on matrix and cell-surface substrates in a spatially restricted manner. Expression data from public databases indicate enrichment in skin, connective tissue, and selected neural tissues.

### Activation & Processing

Like most ADAMTS family members, ADAMTS20 is synthesised as a zymogen carrying an N-terminal propeptide that maintains latency via a cysteine-switch mechanism, in which a conserved cysteine coordinates the catalytic zinc and prevents substrate access. Removal of the propeptide by furin-like proprotein convertases at a consensus RXXR site is required for activation. The mature enzyme requires zinc for catalytic activity and calcium for structural integrity, consistent with metzincin superfamily enzymology. Additional post-translational regulation may occur through C-mannosylation of TSR modules, a modification documented for related ADAMTS members and relevant to secretion efficiency.

### Key Substrates & Protease-Independent Functions

Degradomic approaches have identified membrane type 1-matrix metalloproteinase (MT1-MMP/MMP-14) as a substrate of ADAMTS20, placing this protease within pericellular proteolytic networks. Versican, a large chondroitin sulfate proteoglycan and established substrate of multiple ADAMTS family members including ADAMTS9, is also a candidate substrate for ADAMTS20 given sequence and functional homology. Beyond proteolysis, the C-terminal GON domain of ADAMTS20 has been reported to mediate cargo transport from the endoplasmic reticulum to the Golgi apparatus in a protease-independent manner, broadening its functional repertoire beyond ECM remodelling.

### Role in Development & Pigmentation

Genetic studies in mice have established that loss-of-function mutations in Adamts20 produce coat colour defects attributable to failure of melanoblast survival or migration, phenocopying mutations in Adamts9. The two paralogues show partially redundant functions in neural crest-derived melanocyte development, with compound mutants displaying more severe pigmentation defects than single knockouts. These observations position ADAMTS20 as a regulator of extracellular matrix composition in the microenvironments traversed by migrating melanoblasts, with versican cleavage proposed as one mechanism by which the protease facilitates cell movement through developing tissues.

### Disease Relevance

Human genetic studies have linked ADAMTS20 variants to skeletal and ocular phenotypes, consistent with broader roles for ADAMTS-family proteases in connective tissue homeostasis. Somatic alterations in ADAMTS20 have been catalogued in several cancer types, though its precise role as a tumour suppressor or modifier remains under investigation. Given its activity on ECM substrates and pericellular protease networks, dysregulation of ADAMTS20 may contribute to pathological matrix remodelling in fibrosis, tumour invasion, and developmental disorders. Its restricted normal expression profile makes it of interest as a potential disease biomarker in tissues where aberrant re-expression is observed.

Gene & Protein Reference

|                      |                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------|
| Gene Symbol          | ADAMTS20                                                                                  |
| HGNC                 | HGNC:15681                                                                                |
| NCBI Gene ID (Human) | 170689                                                                                    |
| NCBI Gene ID (Mouse) | 238322                                                                                    |
| Ensembl              | ENSG00000173157                                                                           |
| OMIM                 | 608783                                                                                    |
| UniProt (Human)      | P59510                                                                                    |
| UniProt (Mouse)      | Q6S5H4                                                                                    |
| Protein Family       | ADAMTS family; metzincin superfamily; long-form ADAMTS subgroup (GON domain-containing)   |
| Predicted MW         | ~215 kDa (unprocessed); ~190 kDa (mature, propeptide-removed)                             |
| Observed MW          | ~200–220 kDa by SDS-PAGE (variable with glycosylation)                                    |
| Chromosome           | 12q12                                                                                     |
| Paralogue            | ADAMTS9 (closest paralogue; partially redundant in melanoblast development)               |
| Key Substrates       | MT1-MMP (MMP-14); versican (predicted, by homology with ADAMTS9)                          |
| Activated by         | Furin-like proprotein convertases (propeptide removal at RXXR site)                       |
| Inhibited by         | TIMP-3 (predicted by family homology; specific inhibitor profile not fully characterised) |

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](http://www.triplepointbiologics.com)

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