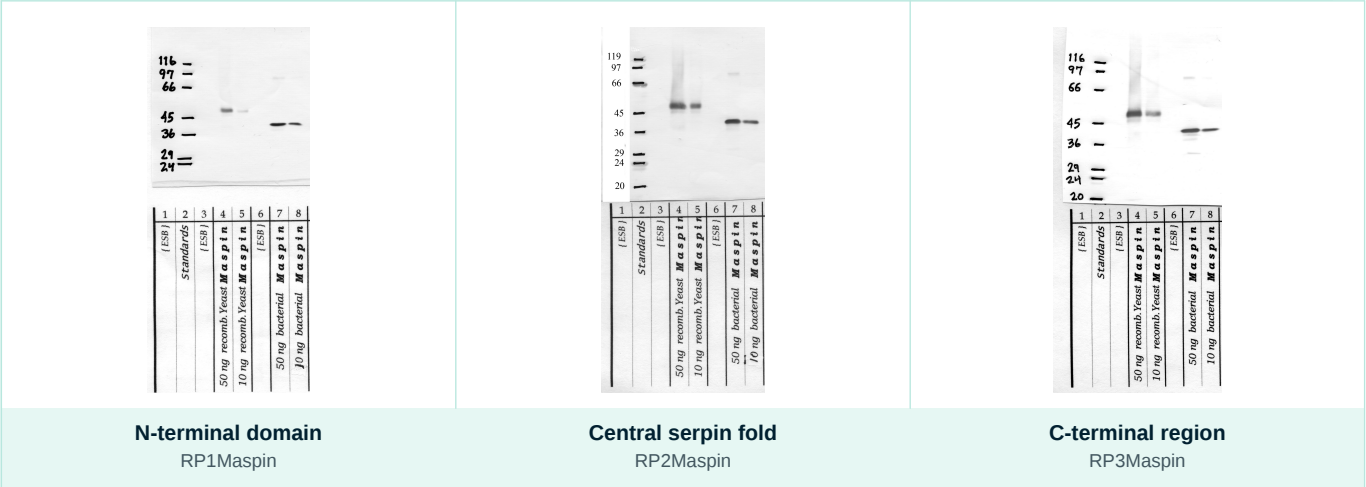


Anti-SerpinB5 Rabbit Polyclonal Antibody

Serpin B5 Maspin, Peptidase inhibitor 5, PI-5,
Gene: SerpinB5 **UniProt:** P36952 **Host:** Rabbit **Clonality:** Polyclonal (pAb)

Product Image



— Western Blot (3-panel validation across domain-specific antibody clones)

Actual Western blot validation for anti-SerpinB5 rabbit polyclonal antibody. 3-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-SerpinB5 Rabbit Polyclonal Antibody
Gene Symbol	SerpinB5
Alternative Names	Serpin B5 Maspin, Peptidase inhibitor 5, PI-5,
UniProt ID	P36952
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
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-serpin-b5-rabbit-polyclonal-antibody

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of SerpinB5. 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
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aminoterminal end	1–51 Region spanning the aminoterminal segment of human Serpin-B5 that precedes helix A (hA) of the conserved serpin fold; this stretch is structurally divergent among clade-B serpins and lies upstream of the principal β -sheet scaffold	RP1SerpinB5	In catalog
Helix C-D	~120–165 Region encompassing the helix C and helix D segment of the Serpin-B5 serpin fold, situated on the outer face of the molecule between the β -sheet B scaffold and the major β -sheet A, in a surface-exposed loop-helix architecture	RP2SerpinB5	In catalog
RCL shoulder	330–370 Region at the proximal shoulder of the reactive centre loop (RCL) of Serpin-B5, immediately upstream of the P1–P1' scissile-bond position; this segment connects β -strand 5A to the exposed RCL and is conformationally constrained relative to canonical inhibitory serpins	RP3SerpinB5	In catalog
—	1–375 Broad-coverage immunogen spanning multiple structural domains of full-length human Serpin-B5, including the aminoterminal region, central β -sheet scaffold (sheets A, B, C), intervening helices, and the reactive centre loop; intended to generate a polyclonal response against multiple accessible epitopes across the native protein	RP-SerpinB5	In catalog
—	—	RP-Maspin	In catalog
—	N-terminal domain	RP1Maspin	In catalog
—	Central serpin fold	RP2Maspin	In catalog
—	C-terminal region	RP3Maspin	In catalog

Applications & Recommended Dilutions

App.	Species	Dilution Range	Notes
WB	Validated-Human Potential	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

Protein Family & General Biology

Serpin-B5 (gene symbol SERPINB5; also known as Maspin or Peptidase Inhibitor 5) is a 375-amino acid member of the serpin superfamily, clade B. Unlike the majority of serpins, Serpin-B5 is classified as a non-inhibitory serpin: it lacks the reactive centre loop (RCL) geometry required to form a stable covalent complex with a serine protease active site, and does not undergo the stressed-to-relaxed (S→R) conformational change that characterises canonical serpin-mediated inhibition. Its tumour-suppressive properties therefore operate through protein–protein and protein–matrix interactions rather than through direct protease trapping.

Expression & Localisation

Under normal physiological conditions, Serpin-B5 is expressed in a range of epithelial tissues including mammary gland, prostate, skin, and lung. Within the mammary gland, expression is largely confined to luminal and myoepithelial cells of the normal epithelium. Serpin-B5 has been detected in multiple cellular compartments — cytoplasm, nucleus, and associated with the cell surface and extracellular matrix — and the compartmental distribution appears to influence its functional output. Nuclear localisation in particular has been associated with regulation of DNA damage responses and apoptosis.

Tumour-Suppressive Mechanisms

Serpin-B5 exerts tumour-suppressive activity through several interconnected pathways. It promotes cell–extracellular matrix adhesion, reduces integrin-mediated cell migration, and suppresses invasion through basement membrane. At the intracellular level, Serpin-B5 has been linked to the p53 transcriptional network: it is a transcriptional target of p53 and in turn stabilises p53 protein, creating a positive-feedback axis that sensitises cells to apoptotic stimuli. The protein also modulates urokinase-type plasminogen activator (uPA) surface activity and limits plasmin-dependent matrix remodelling without directly inhibiting uPA catalytic activity.

Disease Relevance

Loss of Serpin-B5 expression is documented in breast, prostate, lung, gastric, and colorectal carcinomas, consistent with a tumour-suppressor role. Downregulation is frequently associated with promoter hypermethylation and correlates with tumour grade, lymph node involvement, and reduced patient survival in multiple cohorts. Conversely, certain tumour contexts — notably some salivary gland and thyroid carcinomas — show unexpected upregulation, suggesting context-dependent roles. Subcellular mislocalisation (cytoplasmic-only versus nuclear) rather than simple loss of expression has been proposed as a prognostically relevant variable in several carcinoma types.

Post-Transcriptional Regulation

SERPINB5 mRNA stability and translational efficiency are subject to epitranscriptomic regulation. N6-methyladenosine (m6A) modification, mediated through writer complexes including METTL3, influences Serpin-B5 expression in inflammatory and oncological contexts. Separately, 5-methylcytosine (m5C) modification of SERPINB5 mRNA has been reported to stabilise the transcript, with downstream consequences for cell survival and chemotherapy sensitivity. These findings place Serpin-B5 at the intersection of RNA epigenetics and tumour biology, broadening its relevance beyond classical protein-level regulation.

Structural Features Relevant to Antibody Targeting

The Serpin-B5 polypeptide adopts the conserved serpin fold comprising three β -sheets (A, B, C), nine α -helices (hA–hI), and a surface-exposed RCL. The aminoterminal region (approximately residues 1–60) precedes helix A and is structurally divergent from protease-inhibitory serpins, making it a useful epitope region for antibodies that must distinguish Serpin-B5 from closely related clade-B members such as Serpin-B3 and Serpin-B4. The helix C–D segment and the RCL shoulder represent structurally defined regions accessible in native and denaturing conditions, supporting antibody utility across Western blot and immunohistochemical applications.

Gene & Protein Reference

Gene Symbol	SerpinB5
HGNC	HGNC:8949
NCBI Gene ID (Human)	5268
NCBI Gene ID (Mouse)	20724
Ensembl	ENSG00000206075
OMIM	154790
UniProt (Human)	P36952
UniProt (Mouse)	P cotP70001
Protein Family	Serpin superfamily, clade B (non-inhibitory)
Predicted MW	42 kDa
Observed MW	42–45 kDa (SDS-PAGE; slight anomalous migration reported)
Chromosome	18q21.33
Paralogue	SERPINB3 (Serpin B3/SCCA1), SERPINB4 (Serpin B4/SCCA2)
Key Substrates	No canonical serine protease substrate; modulates surface uPA/plasmin activity indirectly
Activated by	Transcriptionally induced by TP53; promoter responsive to p53 binding
Inhibited by	Promoter hypermethylation (epigenetic silencing); post-transcriptional regulation via m6A (METTL3/YTHDF1 axis) and m5C modification

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.