

Anti-SerpinB11 Rabbit Polyclonal Antibody

Serpin B11

Gene: SerpinB11 **UniProt:** Q96P15 **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-SerpinB11 Rabbit Polyclonal Antibody
Gene Symbol	SerpinB11
Alternative Names	Serpin B11
UniProt ID	Q96P15
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-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-serpin-b11-rabbit-polyclonal-antibody

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of SerpinB11. 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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Amino end mature Serpin-B11	1–51 Region within the amino-terminal segment of mature human Serpin-B11 (UniProt Q96P15), preceding the first major beta-sheet scaffold (β-sheet A), in a portion of the protein distal to the reactive center loop and the shutter/breach regions that define the inhibitory hinge	RP1SerpinB11	In catalog
Reactive Center Loop (RCL)	341–365 Region encompassing the reactive center loop (RCL) of human Serpin-B11, located at the carboxy-terminal extremity of the protein between the terminal beta-strand (s1C) and the P1–P1' scissile bond site; this loop is the primary determinant of proteinase target specificity in inhibitory serpins, though in Serpin-B11 it is non-canonical with respect to inhibitory function	RP2SerpinB11	In catalog
—	1–392 Broad epitope coverage spanning multiple structural domains of human Serpin-B11, including elements of the three beta-sheets (A, B, C), helical scaffold (helices A–I), and flanking loop regions, providing reactivity that is not restricted to a single structural feature of the molecule	RP-SerpinB11	In catalog

Applications & Recommended Dilutions

App.	Species	Dilution Range	Notes
WB	Validated-Human Potential-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

Serpin Superfamily & Clade B Classification

Serpin-B11 (gene symbol SERPINB11; UniProt Q96P15) is a 392-residue intracellular serpin belonging to clade B, the largest and most structurally diverse branch of the human serpin superfamily. Clade B serpins are distinguished from secreted serpins by the absence of a signal peptide and by cytoplasmic or nuclear localization. The human genome encodes at least 13 SERPINB paralogs (SERPINB1–B13), many of which share considerable sequence identity, placing a premium on reagents that can resolve individual family members with confidence.

Catalytic Competency — An Atypical Serpin

Most serpins function as suicide-substrate inhibitors of serine or cysteine proteinases, undergoing a dramatic loop-insertion conformational change upon cleavage of the reactive center loop (RCL) that traps the target protease. Serpin-B11 is regarded as a non-inhibitory serpin: structural analysis indicates that critical scaffold residues required to stabilize the metastable native conformation and execute the inhibitory conformational transition are not conserved in the manner seen in canonical inhibitory serpins. As a result, Serpin-B11 does not form stable, covalent inhibitory complexes with serine proteinases under physiological conditions.

Expression and Tissue Distribution

SERPINB11 transcript and protein expression is restricted primarily to epithelial compartments. Detectable levels have been reported in skin, gastrointestinal mucosa, reproductive tissues — including ovarian surface epithelium and fallopian tube — and in select glandular epithelia. Expression is notably low or absent in most hematopoietic and stromal cell types. This tissue-restricted pattern, combined with altered expression in malignant epithelial cells, has motivated interest in Serpin-B11 as a tissue-selective marker and as a candidate disease-associated protein in epithelial cancers.

Emerging Biological Roles

Despite lacking classical proteinase inhibitory activity, Serpin-B11 has been associated with the regulation of cell survival and death pathways, calcium homeostasis, and cellular stress responses. These functions are consistent with roles proposed for other non-inhibitory clade B serpins, which can act as molecular chaperones, storage proteins, or modulators of signaling cascades independent of protease inhibition. The precise molecular mechanism by which Serpin-B11 participates in these processes — including potential protein–protein interactions or scaffold-dependent regulatory activity — remains an active area of investigation.

Disease Relevance

Altered SERPINB11 expression has been documented in multiple disease contexts. In ovarian cancer, differential expression across histological subtypes — including high-grade serous and clear cell carcinomas — has been associated with clinical parameters including patient prognosis. Serpin-B11 has also appeared in transcriptomic and proteomic studies of acute liver injury and hepatocellular stress, and has been identified within multi-analyte biomarker panels evaluated in prostate cancer research. These associations suggest that, even as a non-inhibitory serpin, Serpin-B11 occupies a biologically meaningful niche in epithelial pathophysiology.

Detection Considerations

Specific immunodetection of Serpin-B11 requires antibodies capable of discriminating it from closely related clade B paralogs including SERPINB3, SERPINB4, and SERPINB5, which share partial sequence homology. Because Serpin-B11 is intracellularly localized, appropriate sample preparation — including sufficient cell lysis and, for immunofluorescence, permeabilization — is essential. On Western blot, Serpin-B11 migrates at approximately 42–44 kDa, modestly above the predicted molecular weight, a behavior consistent with that of other clade B serpins under standard SDS-PAGE conditions.

Gene & Protein Reference

Gene Symbol	SerpinB11
HGNC	HGNC:8942
NCBI Gene ID (Human)	89778
NCBI Gene ID (Mouse)	75677
Ensembl	ENSG00000166033
OMIM	609872
UniProt (Human)	Q96P15
UniProt (Mouse)	Q8BH72
Protein Family	Serpin superfamily, clade B (intracellular/ov-serpin) family
Predicted MW	~42.3 kDa (392 aa)
Observed MW	~42–44 kDa (SDS-PAGE)
Chromosome	18q21.33
Paralogue	SERPINB3, SERPINB4, SERPINB5 (clade B serpins, chromosome 18q21 cluster)
Key Substrates	No confirmed physiological proteinase substrates; non-inhibitory serpin
Activated by	Not established; no canonical proteinase-dependent activation mechanism described
Inhibited by	Not applicable (non-inhibitory serpin; does not form covalent inhibitory complexes with serine proteinases)

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.