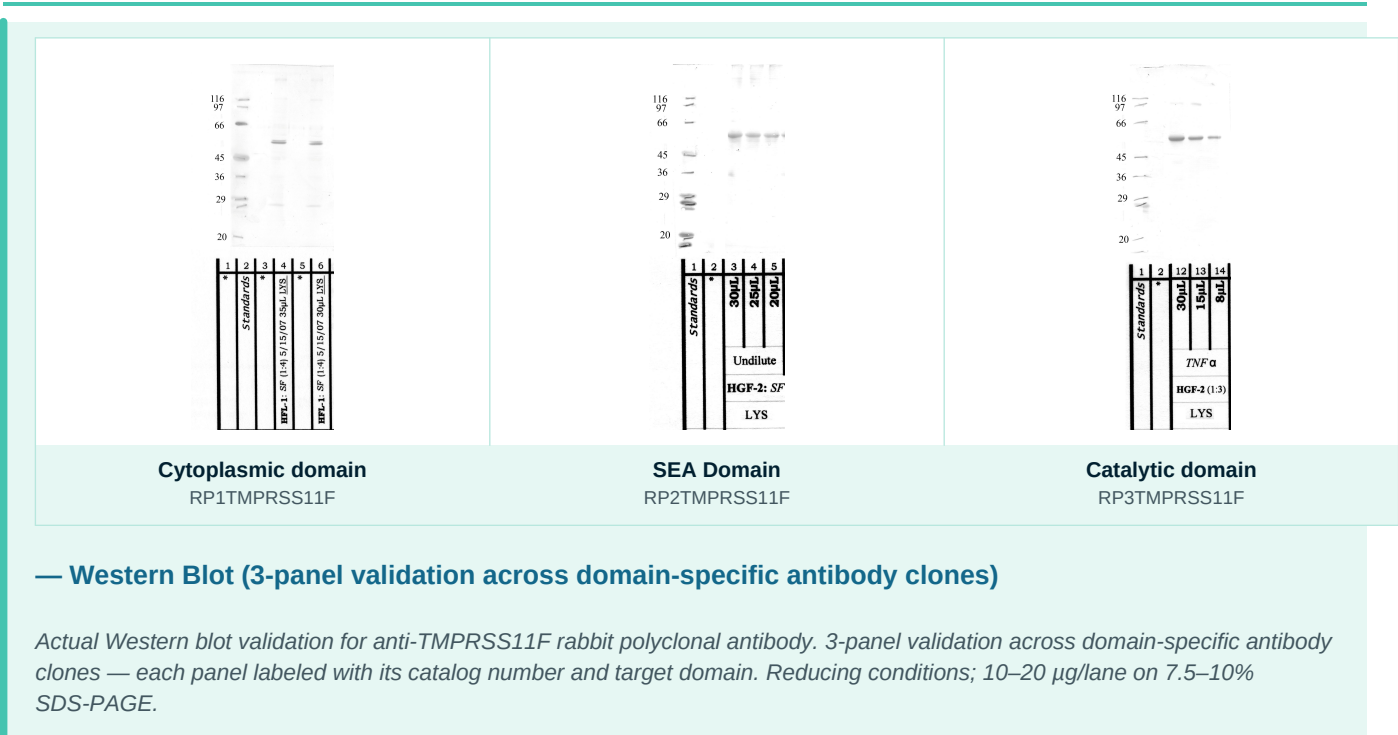


Anti-TMPRSS11F Rabbit Polyclonal Antibody

Transmembrane protease serine 11F EC 3.4.21.-, Airway trypsin-like protease 4,

Gene: TMPRSS11F UniProt: Q6ZWK6 Host: Rabbit Clonality: Polyclonal (pAb)

Product Image



Key Product Facts

Supplier	Triple Point Biologics, Inc. (Sudbury, Ontario, Canada)
Product Name	Anti-TMPRSS11F Rabbit Polyclonal Antibody
Gene Symbol	TMPRSS11F
Alternative Names	Transmembrane protease serine 11F EC 3.4.21.-, Airway trypsin-like protease 4,
UniProt ID	Q6ZWK6
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, 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-tmprss-11f-rabbit-polyclonal-antibody

Available Domain-Specific Variants

Triple Point Biologics produces antibodies to defined structural domains of TMPRSS11F. 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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Cytoplasmic domain	1–32 Region within the short N-terminal cytoplasmic tail of TMPRSS11F, proximal to the transmembrane anchor and distal from the extracellular protease and SEA domains; this segment is wholly intracellular in the native type II membrane orientation	RP1TMPRSS1 1F	In catalog
SEA Domain	57–175 Region within the SEA (sea urchin sperm protein/enterokinase/agrin) domain of TMPRSS11F, located in the extracellular stem region between the transmembrane segment and the C-terminal catalytic domain; this cysteine-rich module is a defining structural feature of the HAT/DESC TTSP subfamily	RP2TMPRSS1 1F	In catalog
Catalytic domain	206–437 Region within the C-terminal trypsin-like serine protease domain of TMPRSS11F, which harbours the conserved His-Asp-Ser catalytic triad and the S1 specificity pocket responsible for trypsin-like (Arg/Lys-preferring) substrate cleavage; this domain is extracellularly exposed in the native membrane orientation	RP3TMPRSS1 1F	In catalog
—	1–438 Broad-coverage reagent spanning multiple structural regions of TMPRSS11F, including epitopes distributed across the cytoplasmic tail, transmembrane region, extracellular SEA domain, and trypsin-like catalytic domain; suitable for applications where domain-specific restriction is not required	RP-TMPRSS11 F	In catalog

Applications & Recommended Dilutions

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

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

TMPRSS11F (also designated Airway Trypsin-Like Protease 4, HATL4, or HAT-like 4) is a member of the HAT/DESC subfamily of type II transmembrane serine proteases (TTSPs). TTSPs are single-pass, N-terminally anchored membrane proteins characterised by an extracellular C-terminal trypsin-like catalytic domain bearing the canonical His-Asp-Ser catalytic triad. The HAT/DESC clade—which includes TMPRSS11A (HAT), TMPRSS11D (DESC1), TMPRSS11B, TMPRSS11E (DESC2), and TMPRSS11F—is distinguished from other TTSP subfamilies by a stem region containing a SEA (sea urchin sperm protein/enterokinase/agrin) domain rather than CUB or LDLR-A repeat modules.

Domain Architecture

The predicted 438-amino-acid TMPRSS11F polypeptide is organised, from N- to C-terminus, as a short cytoplasmic tail, a single-pass transmembrane segment, a SEA domain, and a trypsin-like serine protease domain. The SEA domain is a cysteine-rich module implicated in protein–protein interactions and in auto-proteolytic processing observed in related family members. The catalytic domain contains the conserved Asp-His-Ser triad residues essential for substrate hydrolysis and the S1 specificity pocket, which confers preference for basic residues at the P1 position, consistent with trypsin-like cleavage specificity (after Arg or Lys).

Expression & Localisation

TMPRSS11F transcripts are detected predominantly in stratified squamous epithelial tissues, with particularly notable expression in the esophagus, tongue, and skin. Additional expression has been reported in airway epithelium, consistent with the broader naming convention applied to the HAT/DESC clade. At the subcellular level, TMPRSS11F is predicted to localise to the plasma membrane in a type II orientation, with its catalytic domain exposed to the extracellular space or, when shed, released into the pericellular milieu. This surface localisation positions TMPRSS11F to act on substrates in the immediate extracellular environment.

Activation Mechanism

Like other TTSPs, TMPRSS11F is synthesised as a zymogen and is predicted to require proteolytic cleavage at a conserved Arg residue within the activation peptide, N-terminal to the catalytic domain, to generate the catalytically competent two-chain form. This processing may occur through auto-activation or via trans-activation by other serine proteases present at the epithelial surface. Following cleavage, the propeptide and catalytic chain remain associated through a conserved disulfide bond, retaining the active enzyme at the cell surface. This mechanism is consistent with activation models established for other HAT/DESC subfamily members.

Substrates & Pericellular Function

Endogenous substrates of TMPRSS11F have not been comprehensively defined. By analogy with closely related family members—particularly TMPRSS11A (HAT) and TMPRSS11D (DESC1)—plausible substrates include components of the extracellular matrix, protease-activated receptors (particularly PAR-2), fibronectin, and pro-forms of growth factors or other ectodomain-containing proteins. HAT/DESC proteases have also been shown to process viral coat proteins, including influenza hemagglutinin. TMPRSS11F likely participates in pericellular proteolytic cascades that regulate epithelial barrier function, desquamation, and cell–matrix communication in stratified squamous epithelium.

Disease Relevance

Interest in TMPRSS11F has grown in the context of epithelial malignancy, where altered expression of HAT/DESC family members has been documented in esophageal, head-and-neck, and skin cancers. Dysregulation of surface-anchored serine proteases disrupts normal pericellular proteolysis, potentially contributing to aberrant barrier function, inflammation, and tumour invasion. Additionally, the broader TTSP family has attracted attention as a class of host factors relevant to respiratory virus entry, further motivating characterisation of individual family members including TMPRSS11F. Its restricted expression in stratified squamous epithelia makes it a candidate tissue-specific marker and a potential target for pathway-level studies in epithelial biology.

Gene & Protein Reference

Gene Symbol	TMPRSS11F
HGNC	TMPRSS11F
NCBI Gene ID (Human)	389208
NCBI Gene ID (Mouse)	
Ensembl	ENSG00000197217
OMIM	
UniProt (Human)	Q6ZWK6
UniProt (Mouse)	
Protein Family	Type II transmembrane serine protease (TTSP), HAT/DESC subfamily
Predicted MW	~48 kDa
Observed MW	~50–55 kDa (glycosylated form by SDS-PAGE)
Chromosome	4q13.2
Paralogue	TMPRSS11A (HAT), TMPRSS11D (DESC1), TMPRSS11B, TMPRSS11E (DESC2)
Key Substrates	Predicted: PAR-2, extracellular matrix components, fibronectin; viral coat proteins (e.g. influenza hemagglutinin) by analogy with related HAT/DESC members
Activated by	Auto-activation or trans-activation by co-expressed serine proteases; cleavage at conserved Arg within the activation peptide
Inhibited by	Predicted: serine protease inhibitors including serpins (e.g. HAI-1/SPINT1, HAI-2/SPINT2), aprotinin, leupeptin; not comprehensively characterised for this specific family member

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.