abcam

ab303591

Alexa Fluor® 647 Anti-TMPRSS2 antibody [EPR24407-87]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24407-87
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	0.2 µg/mL

Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information TMPRSS2

Function

Plasma membrane-anchored serine protease that cleaves at arginine residues (PubMed:32703818, PubMed:35676539, PubMed:37990007, PubMed:38964328). Participates in proteolytic cascades of relevance for the normal physiologic function of the prostate (PubMed:25122198). Androgen-induced TMPRSS2 activates several substrates that include pro-hepatocyte growth factor/HGF, the protease activated receptor-2/F2RL1 or matriptase/ST14 leading to extracellular matrix disruption and metastasis of prostate cancer cells (PubMed:15537383, PubMed:25122198, PubMed:26018085). In addition, activates trigeminal neurons and contribute to both spontaneous pain and mechanical allodynia (By similarity). (Microbial infection) Facilitates human coronaviruses SARS-CoV and SARS-CoV-2 infections via two independent mechanisms, proteolytic cleavage of ACE2 receptor which promotes viral uptake, and cleavage of coronavirus spike glycoproteins which activates the glycoprotein for host cell entry (PubMed:24227843, PubMed:32142651, PubMed:32404436, PubMed:33051876, PubMed:34159616, PubMed:35676539, PubMed:37990007). The cleavage of SARS-COV2 spike glycoprotein occurs between the S2 and S2' site (PubMed:32703818). Upon SARS-CoV-2 infection, increases syncytia formation by accelerating the fusion process (PubMed:33051876, PubMed:34159616, PubMed:35676539). Proteolytically cleaves and activates the spike glycoproteins of human coronavirus 229E (HCoV-229E) and human coronavirus EMC (HCoV-EMC) and the fusion glycoproteins F0 of Sendai virus (SeV), human metapneumovirus (HMPV), human parainfluenza 1, 2, 3, 4a and 4b viruses (HPIV). Essential for spread and pathogenesis of influenza A virus (strains H1N1, H3N2 and H7N9); involved in proteolytic cleavage and activation of hemagglutinin (HA) protein which is essential for viral infectivity. (Microbial infection) Receptor for human coronavirus HKU1-CoV, acts synergistically with disialoside glycans to facilitate the entry of the virus. After binding to cell-surface disialoside glycans, the viral S protein interacts with the inactive form of TMPRSS2 and inhibits its protease activity.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

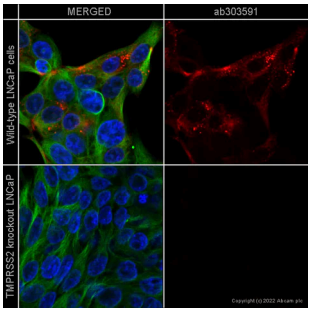
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-TMPRSS2 antibody [EPR24407-87] (ab303591)

ab303591 staining TMPRSS2 in wild-type LnCAP (Human prostate cancer cell line) cells (top panel) and TMPRSS2 knockout LnCAP cells (ab273745) (bottom panel). The cells were fixed with 100% methanol (5 min, -20°C) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3 M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab303591 at 0.2 µg/ml (shown in red) and ab195883 (Alexa Fluor®488 Anti-Tubulin antibody [YOL1/34]) at 5 µg/ml (shown in green) overnight at 4°C. Nuclear DNA was labeled with DAPI (shown in blue). Image was taken with confocal microscope (Leica-Microsystems TCS SP8).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.