abcam

ab280569

# Anti-TMPRSS2 antibody [EPR24407-87] - BSA and Azide free

Recombinant | RabMAb | KO Validated

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR24407-87 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.994 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## IP

### Not recommended

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Not recommended

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Not recommended

| | |
|---|---|
| **Species** | Rat, Mouse, Human |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Rat, Mouse |
| **Dilution info** | - |
| **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 conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## Notes

ab280569 is the carrier-free version of ab280567.

**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.

**Conjugation ready**

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## 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.

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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.

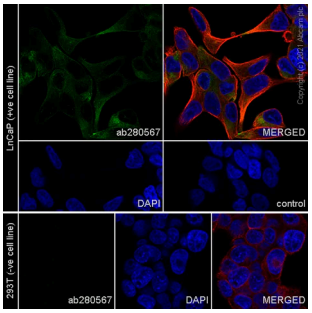
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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## 3 product images

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### Immunocytochemistry/ Immunofluorescence - Anti-TMPRSS2 antibody [EPR24407-87] - BSA and Azide free (ab280569)

TMPRSS2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TMPRSS2 antibody

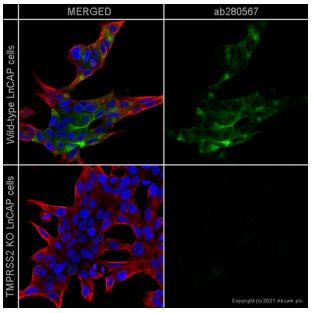
This data was developed using ab280567, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized LNCaP and HEK-293 cells labelling TMPRSS2 with ab280567 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic and membranous staining in LNCaP cell line.

**Negative control**: HEK-293 (PMID:20631123).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

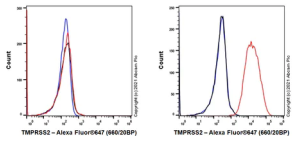
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## Immunocytochemistry/ Immunofluorescence - Anti-TMPRSS2 antibody [EPR24407-87] - BSA and Azide free (ab280569)

TMPRSS2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TMPRSS2 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab280567). ab280567 staining TMPRSS2 in wild-type LnCAP cells (top panel) and TMPRSS2 knockout LnCAP cells (ab273745) (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab280567 at 1µg/ml concentration and ab7291 (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (ab150120) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).




## Flow Cytometry - Anti-TMPRSS2 antibody [EPR24407-87] - BSA and Azide free (ab280569)

TMPRSS2 Flow Cytometry staining using rabbit Anti-TMPRSS2 antibody

This data was developed using ab280567, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of HEK-293T (Human embryonic kidney epithelial cell, Left)/ LNCaP (Human prostate carcinoma epithelial cell, Right) cells labelling TMPRSS2 with ab280567 at 1/500 dilution (0.1µg)/ red compared with Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti rabbit IgG (Alexa Fluor® 647, ab150079) at 1/2000 dilution was used as the secondary antibody.

**Negative control**: HEK-239T (PMID: 20631123).

Gated on viable cells.

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