For Research Use Only

TMPRSS2 Polyclonal antibody

Catalog Number:14437-1-AP 35 Publications

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Basic Information

Catalog Number:
14437-1-AP

Concentration:
600 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG5824

GenBank Accession Number:
BC051839

GeneID (NCBI):
7113

UNIPROT ID:
O15393

Full Name:
transmembrane protease, serine 2

Calculated MW:
54 kDa

Observed MW:
70, 54, 31 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:2000
IHC: 1:100-1:400
IF-P: 1:50-1:500

Applications

Tested Applications:
WB, IHC, IF-P, ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, monkey

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : COLO 320 cells, Caco-2 cells, T-47D cells

IHC : human colon cancer tissue, human prostate cancer tissue, mouse kidney tissue

IF-P : human tonsillitis tissue,

Background Information

TMPRSS2, also named as PRSS10, is a type II transmembrane serine protease which is highly expressed by the epithelium of the human prostate gland. TMPRSS2 may contribute to prostate tumour metastasis via the activation of PAR-2. TMPRSS2 is a Serine protease that proteolytically cleaves and activates the viral spike glycoproteins which facilitate virus-cell membrane fusions. TMPRSS2 is a host cell factor that is critical for the spread of several clinically relevant viruses, including influenza A viruses and coronaviruses (PMID: 23468491, 30626688). SARS-CoV-2 uses the SARS-CoV receptor ACE2 for entry and the serine protease TMPRSS2 for S protein priming. The initial spike protein priming by TMPRSS2 is essential for the entry and viral spread of SARS-CoV-2 through interaction with the ACE2 receptor (PMID: 32142651, 30626688). Camostat mesylate, an inhibitor of TMPRSS2, can block SARS-CoV-2 infection of lung cells (PMID: 32142651). The MW of TMPRSS2 is about 65-70 kDa. It can be cleaved into some chains with MW 54 kDa, 31 kDa and 26 kDa (PMID: 25734995, 20382709, 26018085).

Notable Publications

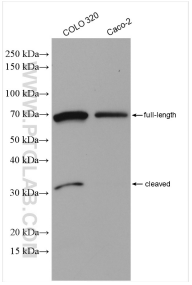
Author	Pubmed ID	Journal	Application
Jialu Qiao	33008593	Biochem Biophys Res Commun	WB
Min Zhang	33173719	Adv Sci (Weinh)	WB
Mehdi Baratchian	33083800	bioRxiv	WB

Storage

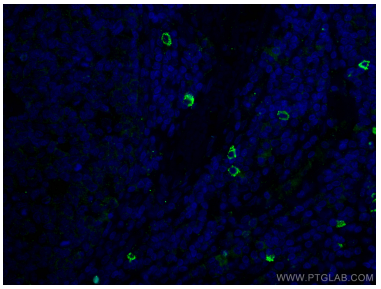
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

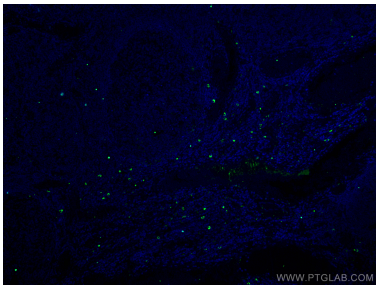
Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 14437-1-AP (TMPRSS2 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed human tonsillitis tissue using TMPRSS2 antibody (14437-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L).



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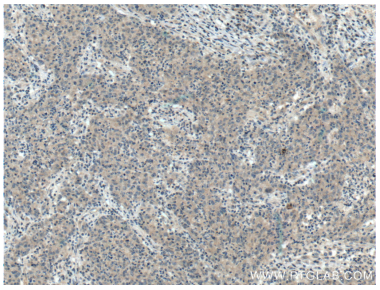
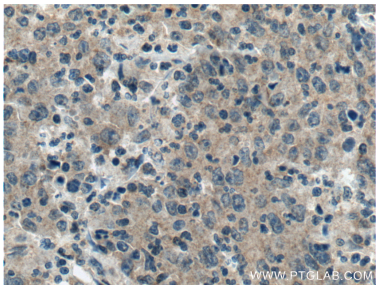


Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 14437-1-AP (TMPRSS2 Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 14437-1-AP (TMPRSS2 Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).