abcam

ab271292

Anti-TVA antibody [PICA187E]

Recombinant

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	PICA187E
Purification technique	Affinity purification Protein A
Concentration	1.021 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Bird
Dilution info	1/5000
Notes	-

Flow Cyt (Intra)

Tested

Species	Bird
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Bird
Dilution info	1/50
Notes	-

IHC-P

Tested

Species	Bird
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information RSVR_COTJA

Function	Responsible for susceptibility to the retrovirus subgroup A Rous sarcoma virus.

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

Notes

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.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Tumor Virus A Receptor (TVA) often referred to as Tva or LDLR family member 1 (LDLR1) is a protein that acts as a receptor for specific avian sarcoma and leukosis viruses (ASLV) subgroup A. It has a molecular mass of approximately 47 kDa. TVA is expressed on the surface of cells in various tissues playing a role in viral entry. It belongs to the low-density lipoprotein receptor (LDLR) family which is involved in endocytosis and ligand binding processes.
Biological function summary	TVA acts as part of the viral entry complex facilitating the binding and internalization of certain retroviruses. Through its function as a receptor TVA allows the virus to attach to and penetrate host cells initiating infection. The protein’s role in viral entry makes it important for viral lifecycle progression. TVA does not function in isolation but often works in tandem with other receptors to mediate efficient viral uptake into the host cell.
Pathways	TVA participates in the endocytosis pathway which is integral for the uptake of viruses into cells. This pathway includes other proteins such as clathrin and dynamin which play roles in vesicle formation and membrane scission. TVA's interaction with these components facilitates the internalization and trafficking of viral particles within the host cell aiding in the infection process. The protein is also related to signal transduction pathways that might be hijacked by viruses to sustain their replication inside host cells.

Associated diseases and disorders

The role of TVA in viral infections positions it as a critical factor in understanding certain leukemias and sarcomas caused by ASLV. The infection process mediated by TVA can lead to cellular transformation and tumorigenesis particularly in avian species. While direct associations with human diseases have not been extensively documented studying TVA's interaction with viral glycoproteins provides insight into similar mechanisms in other retroviral infections including those involving related receptors like LDLR.

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

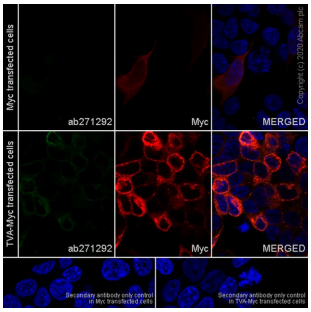
We do not recommend this combination. It is not covered by our product promise.

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.

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

7 product images

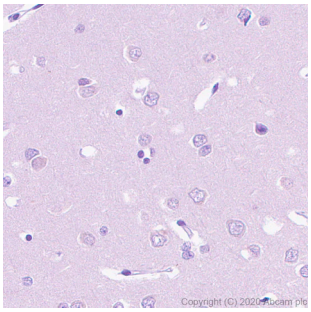


Immunocytochemistry/ Immunofluorescence - Anti-TVA antibody [PICA187E] (ab271292)

TVA Immunocytochemistry/ Immunofluorescence staining using rat Anti-TVA antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (human embryonic kidney) cells transfected with myc-tagged TVA expression vector labelling TVA with ab271292 at 1/50 (21.96 µg/ml) dilution, followed by ab150157 Goat Anti-rat IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in HEK-293T cells transfected with myc-tagged TVA expression vector. Myc-Tag mouse mAb (Alexa Fluor® 647) was used as a counterstain at 1/200 dilution (Red). The nuclear counterstain was DAPI (Blue).

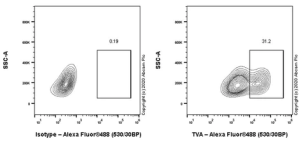
Secondary antibody control: Used PBS instead of ab271292, followed by ab150157 Goat Anti-rat IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TVA antibody [PICA187E] (ab271292)

TVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-TVA antibody

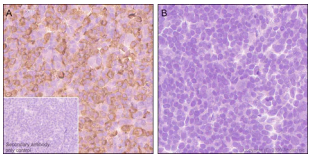
Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling TVA with ab271292 at 1/100 (10.98 µg/ml) dilution followed by a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882). **Negative control:** No staining on human cerebrum. The section was incubated with ab271292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882).
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-TVA antibody [PICA187E] (ab271292)

TVA Flow Cytometry (Intracellular) staining using rat Anti-TVA antibody

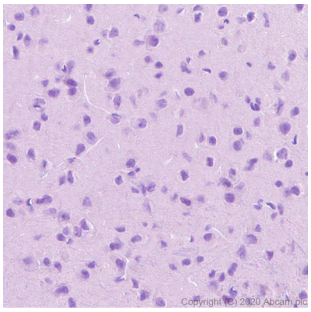
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HEK-293T (human embryonic kidney epithelial cell) (transfected with myc tagged TVA construct) cells labelling TVA with ab271292 at 1/1000 dilution (0.1µg) (Right panel) compared with a rat monoclonal IgG isotype control (Left panel). Goat F (ab)2 Anti-Rat IgG Fc (Alexa Fluor® 488, ab150161)was used as the secondary antibody at a 1/2000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TVA antibody [PICA187E] (ab271292)

TVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-TVA antibody

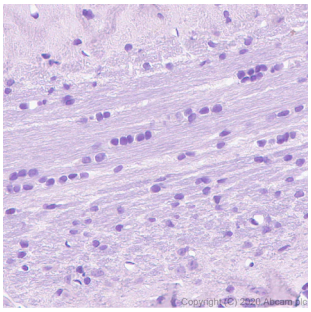
Immunohistochemical analysis of paraffin-embedded (Panel A) HEK-293T transfected with a TVA construct and (Panel B) HEK-293T transfected with empty plasmid, labeling TVA with ab271292 at 1/100 (10.98 µg/ml) dilution followed by a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882). Positive staining on (Panel A) HEK-293T transfected with a TVA construct, no staining on (Panel B) HEK-293T transfected with empty plasmid. The section was incubated with ab271292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882).
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TVA antibody [PICA187E] (ab271292)

TVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-TVA antibody

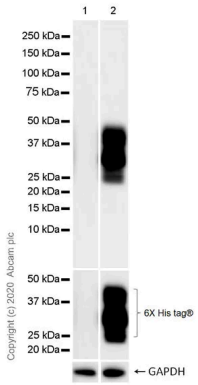
Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling TVA with ab271292 at 1/100 (10.98 µg/ml) dilution followed by a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882). **Negative control:** No staining on mouse cerebrum. The section was incubated with ab271292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882).
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TVA antibody [PICA187E] (ab271292)

TVA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-TVA antibody

Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling TVA with ab271292 at 1/100 (10.98 µg/ml) dilution followed by a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882). **Negative control:** No staining on rat cerebrum. The section was incubated with ab271292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-rat IgG H&L (HRP polymer) (ab214882). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-TVA antibody [PICA187E] (ab271292)

TVA Western blot staining using rat Anti-TVA antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-TVA antibody [PICA187E] (ab271292) at 1/5000 dilution

Lane 1:
HEK-293T (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate at 10 µg

Lane 2:
HEK-293T transfected with TVA expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rat IgG H&L (HRP) (ab205720) at 1/50000 dilution

Observed band size: 25-37 kDa

Exposure time: 10s

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