abcam

ab234426

Anti-SV40 T-antigen antibody [EPR22694-148]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR22694-148
Purification technique	Affinity purification Protein A
Concentration	0.533 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Simian Virus 40
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Simian Virus 40
Dilution info	1/50
Notes	-

IP

Tested

Species	Simian Virus 40
Dilution info	1/30
Notes	-

Flow Cyt (Intra)

Tested

Species	Simian Virus 40
Dilution info	1/500
Notes	-

Target data

See full target information SV40 T-antigen

Function

Isoform large T antigen is a key early protein essential for both driving viral replication and inducing cellular transformation. Plays a role in viral genome replication by driving entry of quiescent cells into the cell cycle and by autoregulating the synthesis of viral early mRNA. Displays highly oncogenic activities by corrupting the host cellular checkpoint mechanisms that guard cell division and the transcription, replication, and repair of DNA. Participates in the modulation of cellular gene expression preceeding viral DNA replication. This step involves binding to host key cell cycle regulators retinoblastoma protein RB1/pRb and TP53. Induces the disassembly of host E2F1 transcription factors from RB1, thus promoting transcriptional activation of E2F1-regulated S-phase genes. Inhibits host TP53 binding to DNA, abrogating the ability of TP53 to stimulate gene expression. Plays the role of a TFIID-associated factor (TAF) in transcription initiation for all three RNA polymerases, by stabilizing the TBP-TFIIA complex on promoters. Initiates viral DNA replication and unwinding via interactions with the viral origin of replication. Binds two adjacent sites in the SV40 origin. The replication fork movement is facilitated by Large T antigen helicase activity. Has

processive 3'-5' DNA helicase activity which requires a short 3' single-stranded region and ATP; other (d)NTPs can partially replace ATP (PubMed:2826443, PubMed:2826446). Activates the transcription of viral late mRNA, through host TBP and TFIIA stabilization. Interferes with histone deacetylation mediated by HDAC1, leading to activation of transcription. May inactivate the growth-suppressing properties of the E3 ubiquitin ligase CUL7. Isoform 17kT antigen targets host RBL2 for degradation and promotes cell proliferation. Transactivates host cyclin A promoter through its J domain. Unwinds G4 DNA (planar arrays of 4 guanine bases stabilized by hydrogen bonds, parallel and antiparallel arrays were tested); unwinding occurs in the 3'-5' direction, requires a 3' single-stranded end and hydrolyzable ATP (PubMed:9016557).

Storage

Shipped at conditions	Conditional Ambient
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

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.

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.

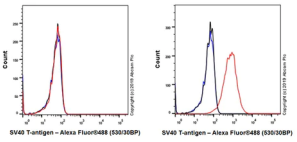
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

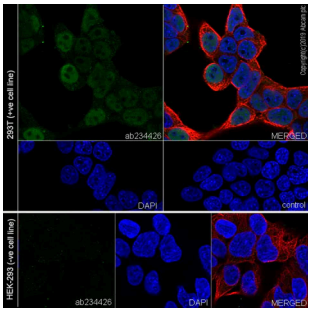
4 product images



Flow Cytometry (Intracellular) - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426)

SV40 T-antigen Flow Cytometry (Intracellular) staining using rabbit Anti-SV40 T-antigen antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HEK-293 (human embryonic kidney epithelial cell, Left) / 293T (SV40 transfected human embryonic kidney epithelial cell, Right) cells labeling SV40 T-antigen with ab234426 at 1/500 dilution (red), compared with aRabbit monoclonal IgG isotype control (ab172730,Black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/2000 dilution.
Negative control: HEK-293.

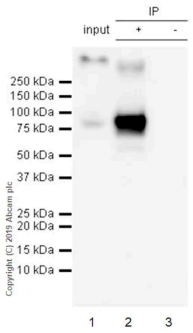


Immunocytochemistry/ Immunofluorescence - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426)

SV40 T-antigen Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SV40 T-antigen antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (human embryonic kidney epithelial cell) cells labeling SV40 T-antigen with ab234426 at 1/50 dilution, followed by an AlexaFluor®488 Goat anti-Rabbit secondary (ab150077) (Green) at 1/1000 dilution. Confocal image showing nuclear and weak cytoplasmic staining in HEK-293T cells. The nuclear counterstain is DAPI (Blue). Tubulin was stained using an Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (Red) at 1/200 dilution.

Negative control: HEK-293(PMID: 15175262).



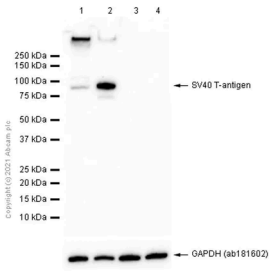
Immunoprecipitation - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426)

SV40 T-antigen was immunoprecipitated from 0.35 mg HEK-293T (SV40 transfected human embryonic kidney epithelial cell) whole cell lysate with ab234426 at 1/30 dilution. Western blot was performed on the immunoprecipitate using ab234426 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used as the secondary antibody at 1/5000 dilution.
Lane 1: HEK-293T (SV40 transfected) whole cell lysate 10 µg (input).
Lane 2: ab234426 IP in HEK-293T (SV40 transfected) whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab234426 in HEK-293T whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 seconds.

All lanes:
Immunoprecipitation - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426)



Western blot - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426)

SV40 T-antigen Western blot staining using rabbit Anti-SV40 T-antigen antibody

Blocking buffer and concentration: 5% NFDM/TBST
Diluting buffer and concentration: 5% NFDM/TBST

All lanes:
Western blot - Anti-SV40 T-antigen antibody [EPR22694-148] (ab234426) at 1/5000 dilution

Lane 1:
293T (SV40 transfected human embryonic kidney epithelial cell) whole cell lysate prepared in RIPA lysis method at 20 µg

Lane 2:
293T (SV40 transfected human embryonic kidney epithelial cell) whole cell lysate prepared in 1%SDS Hot lysis method at 20 µg

Lane 3:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate prepared in RIPA lysis method at 20 µg

Lane 4:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate prepared in 1%SDS Hot lysis method at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 90 kDa

Exposure time: 40s

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