abcam

ab248532

Anti-TIP49A antibody [EPR6028] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR6028
Purification technique	Affinity purification
Dissociation constant	1.95 x 10^{-10} M

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RUVBL1

Function

Possesses single-stranded DNA-stimulated ATPase and ATP-dependent DNA helicase (3' to 5') activity; hexamerization is thought to be critical for ATP hydrolysis and adjacent subunits in the ring-like structure contribute to the ATPase activity (PubMed:17157868, PubMed:33205750). Component of the NuA4 histone acetyltransferase complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A (PubMed:14966270). This modification may both alter nucleosome-DNA interactions and promote interaction of the modified histones with other proteins which positively regulate transcription (PubMed:14966270). This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair (PubMed:14966270). The NuA4 complex ATPase and helicase activities seem to be, at least in part, contributed by the association of RUVBL1 and RUVBL2 with EP400. NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage (PubMed:14966270). Component of a SWR1-like complex that specifically mediates the removal of histone H2A.Z/H2AZ1 from the nucleosome (PubMed:24463511). Proposed core component of the chromatin remodeling INO80 complex which exhibits DNA- and nucleosome-activated ATPase activity and catalyzes ATP-dependent nucleosome sliding (PubMed:16230350, PubMed:21303910). Plays an essential role in oncogenic transformation by MYC and also modulates transcriptional activation by the LEF1/TCF1-CTNNB1 complex (PubMed:10882073, PubMed:16014379). Essential for cell proliferation (PubMed:14506706). May be able to bind plasminogen at cell surface and enhance plasminogen activation (PubMed:11027681).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab248532 is the carrier-free version of ab133513.

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.

Supplementary info

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

Activity summary	TIP49A also known as RUVBL1 or Pontin is a 54 kDa protein that plays a mechanical role in various cellular processes. TIP49A functions as an ATPase with a part in the regulation of the chromatin structure and remodeling. It is expressed in the nucleus and cytoplasm of many cell types indicating its broad involvement in cellular activities. Being highly evolutionarily conserved TIP49A shows a strong degree of structural conservation which hints at its essential roles maintained across species.
Biological function summary	TIP49A contributes to the assembly and function of multiprotein complexes. It works closely as part of the INO80 and TIP60 chromatin remodeling complexes which are important for transcription regulation and DNA repair. Through these associations TIP49A is key in controlling access to DNA impacting gene expression and stability of chromosomes. Its role in mediating interactions between different protein partners underlines its importance in maintaining cellular homeostasis and response to DNA damage.

Pathways	TIP49A participates in essential cellular processes like transcriptional regulation and DNA repair. In the context of transcription regulation TIP49A operates alongside MYC a well-known oncogene to influence gene expression linked to cell proliferation. It also plays a significant role in the homologous recombination repair pathway interacting with proteins like RAD51 to ensure proper repair of DNA double-strand breaks. These pathways demonstrate the integral function of TIP49A in preserving genomic integrity and normal cell cycle progression.
Associated diseases and disorders	TIP49A has links to cancer progression and neurodegenerative diseases. Overexpression of TIP49A is observed in various cancers including breast and colorectal cancer where it correlates with tumor growth and poor prognosis. It interacts with c-Myc a protein with significant oncogenic potential to drive aberrant cell proliferation. In neurodegenerative conditions such as Alzheimer's disease TIP49A's connection to chromatin remodeling dysregulation is of interest although research is still ongoing to fully elucidate this relationship.

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

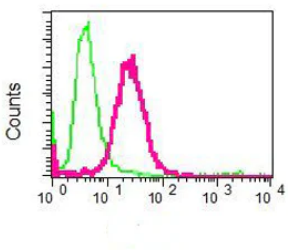
We do not recommend this combination. It is not covered by our product promise.

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.

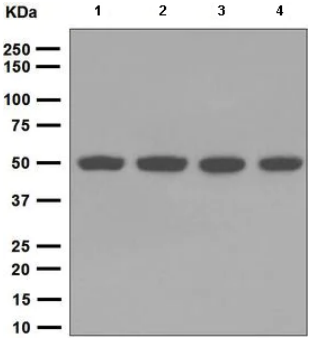
3 product images



Flow Cytometry (Intracellular) - Anti-TIP49A antibody [EPR6028] - BSA and Azide free (ab248532)

TIP49A Flow Cytometry (Intracellular) staining using rabbit Anti-TIP49A antibody

This data was developed using ab133513, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeablized 293T cells labelling TIP49A with ab133513 at 1/10 dilution (red) or negative Rabbit IgG (green).



Western blot - Anti-TIP49A antibody [EPR6028] - BSA and Azide free (ab248532)

TIP49A Western blot staining using rabbit Anti-TIP49A antibody

This data was developed using ab133513, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-TIP49A antibody [EPR6028] (ab133513) at 1/1000 dilution

Lane 1:
K562 cell lysate at 10 µg

Lane 2:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Lane 3:
HT1080 cell lysate at 10 µg

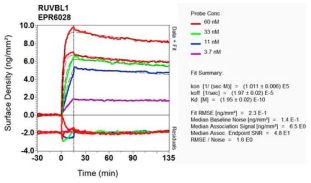
Lane 4:
HT29 cell lysate at 10 µg

Secondary

All lanes:
Goat-anti-rabbit HRP at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 50 kDa



OI-RD Scanning - Anti-TIP49A antibody [EPR6028] - BSA and Azide free (ab248532)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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