abcam

ab184961

Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal

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	EPR14840(B)
Purification technique	Affinity purification Protein A
Concentration	0.492 - 0.53 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/50 - 1/70
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information EXOSC3

Function	Non-catalytic component of the RNA exosome complex which has 3'->5' exoribonuclease activity and participates in a multitude of cellular RNA processing and degradation events. In the nucleus, the RNA exosome complex is involved in proper maturation of stable RNA species such as rRNA, snRNA and snoRNA, in the elimination of RNA processing by-products and non-coding 'pervasive' transcripts, such as antisense RNA species and promoter-upstream transcripts (PROMPTs), and of mRNAs with processing defects, thereby limiting or excluding their export to the cytoplasm. The RNA exosome may be involved in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM) by targeting AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, the RNA exosome complex is involved in general mRNA turnover and specifically degrades

inherently unstable mRNAs containing AU-rich elements (AREs) within their 3' untranslated regions, and in RNA surveillance pathways, preventing translation of aberrant mRNAs. It seems to be involved in degradation of histone mRNA. The catalytic inactive RNA exosome core complex of 9 subunits (Exo-9) is proposed to play a pivotal role in the binding and presentation of RNA for ribonucleolysis, and to serve as a scaffold for the association with catalytic subunits and accessory proteins or complexes. EXOSC3 as peripheral part of the Exo-9 complex stabilizes the hexameric ring of RNase PH-domain subunits through contacts with EXOSC9 and EXOSC5.

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.

Supplementary info

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

Activity summary	EXOSC3 also known as exosome component 3 is a core part of the RNA exosome complex. This protein weighs approximately 33 kDa and is located in both the nucleus and cytoplasm of eukaryotic cells. EXOSC3 along with other exosome components is highly expressed in tissues with rapid cell division and RNA turnover such as the bone marrow and spleen. These expression patterns are consistent with its function in RNA processing and degradation.
Biological function summary	EXOSC3 plays a critical role in determining RNA stability as part of the exosome complex. This multi-subunit complex degrades various RNA species including mRNA rRNA and snRNA thereby maintaining cellular RNA quality and quantity. EXOSC3 in conjunction with other exosome components executes an important function in RNA surveillance and quality control. Through exosomal complexes EXOSC3 influences many processes that are necessary for cell growth and homeostasis.
Pathways	The exosome component EXOSC3 shows involvement in the RNA processing pathway and the nuclear mRNA catabolic pathway. This protein collaborates with other exosome components like EXOSC10 to perform precise RNA surveillance. The complex carefully regulates RNA processing events within these pathways to ensure cellular homeostasis and proper gene expression regulation.
Associated diseases and disorders	Mutations or malfunctions in EXOSC3 link to specific conditions notably pontocerebellar hypoplasia type 1B and spinal muscular atrophy. In particular through its role in RNA metabolism alterations in EXOSC3's function can lead to motor neuron dysfunction. EXOSC3's correlation with EXOSC8 another exosome component can exacerbate symptoms associated with these neural disorders shedding light on the importance of precise RNA processing in neurological health.

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

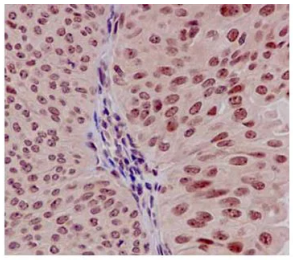
We do not recommend this combination. It is not covered by our product promise.

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.

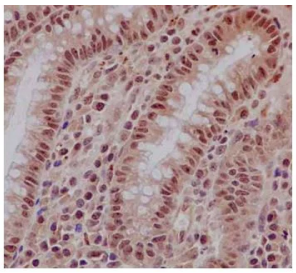
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

EXOSC3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EXOSC3 antibody

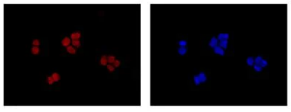
Immunohistochemistry analysis of Formalin/PFA-fixed paraffin-embedded Human transitional cell carcinoma of bladder tissue labeling EXOSC3 with ab184961 at 1/50 dilution. Counterstained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

EXOSC3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EXOSC3 antibody

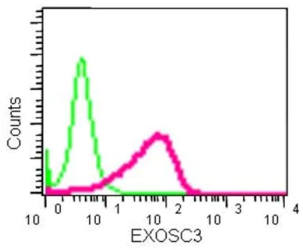
Immunohistochemistry analysis of Formalin/PFA-fixed paraffin-embedded Human colon tissue labeling EXOSC3 with ab184961 at 1/50 dilution. Counterstained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

EXOSC3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-EXOSC3 antibody

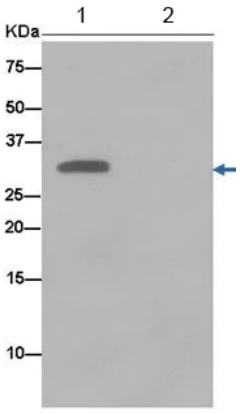
Immunofluorescent analysis of 4% paraformaldehyde fixed 293T cells labeling EXOSC3 with ab184961 at 1/100 dilution (red). Counterstained with Dapi (blue).



Flow Cytometry (Intracellular) - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

EXOSC3 Flow Cytometry (Intracellular) staining using rabbit Anti-EXOSC3 antibody

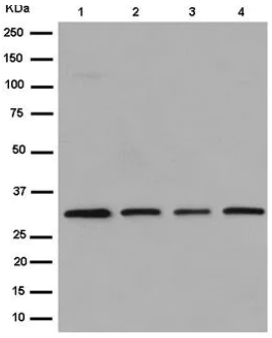
Intracellular Flow Cytometry analysis of 2% paraformaldehyde fixedHeLa cells labeling EXOSC3 with ab184961 at 1/100 dilution (red) or a rabbit IgG isotype control (green), followed by secondary Goat anti rabbit IgG (FITC) at 1/150 dilution.



Immunoprecipitation - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

Immunoprecipitation analysis of 293T lysates (Lane 1) labeling EXOSC3 with ab184961 at a 1/50 dilution and a negative control PBS (Lane 2). Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG was used as secondary antibody at a 1500 dilution.
All lanes:
Immunoprecipitation - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

Predicted band size: 30 kDa



Western blot - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961)

All lanes:
Western blot - Anti-EXOSC3 antibody [EPR14840(B)] - N-terminal (ab184961) at 1/10000 dilution

Lane 1:
293T cell lysates at 20 µg

Lane 2:
HeLa cell lysates at 20 µg

Lane 3:
Jurkat cell lysates at 20 µg

Lane 4:
Raji cell lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 30 kDa

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