abcam

ab131268

Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)]

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	EPR5662(2)
Purification technique	Affinity purification Protein A
Concentration	0.788 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	(Heat to 98°C, allow to cool for 10-20 minutes)

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/120
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information THOC1

Function

Component of the THO subcomplex of the TREX complex which is thought to couple mRNA transcription, processing and nuclear export, and which specifically associates with spliced mRNA and not with unspliced pre-mRNA (PubMed:15833825, PubMed:15998806, PubMed:17190602). Required for efficient export of polyadenylated RNA (PubMed:23222130). The THOC1-THOC2-THOC3 core complex alone is sufficient to bind export factor NXF1-NXT1 and promote ATPase activity of DDX39B/UAP56 (PubMed:33191911). TREX is recruited to spliced mRNAs by a transcription-independent mechanism, binds to mRNA upstream of the exon-junction complex (EJC) and is recruited in a splicing- and cap-dependent manner to a region near the 5' end of the mRNA where it functions in mRNA export to the cytoplasm via the TAP/NXF1 pathway (PubMed:15833825, PubMed:15998806, PubMed:17190602). Regulates transcriptional elongation of a subset of genes (PubMed:22144908). Involved in genome stability by preventing co-transcriptional R-loop formation (By similarity). May play a role in hair cell formation, hence may be involved in hearing (By similarity). Participates in an apoptotic pathway which is characterized by activation of caspase-6, increases in the expression of BAK1 and BCL2L1 and activation of NF-kappa-B. This pathway does not require p53/TP53, nor does the presence of p53/TP53 affect the efficiency of cell killing. Activates a G2/M cell cycle checkpoint prior to the onset of apoptosis. Apoptosis is inhibited by association with RB1. (Microbial infection) The TREX complex is essential for the

export of Kaposi's sarcoma-associated herpesvirus (KSHV) intronless mRNAs and infectious virus production.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

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	Nuclear Matrix Protein p84 also known as 5E10 or simply p84 is a structural protein of the nuclear matrix. It has an approximate mass of 84 kDa. Researchers have identified it as an integral component of the nucleoskeleton providing key structural support within the cell nucleus. The expression of p84 is resourceful within various cell types especially in tissues with high rates of cellular proliferation and turnover.
Biological function summary	Nuclear Matrix Protein p84 assists in nuclear architecture maintenance and organization. It takes part in DNA replication processes and gene regulation by interacting with chromatin and transcription factors. Furthermore p84 contributes to the formation of the ribonucleoprotein complex facilitating RNA processing and transport. This involvement in multiple nuclear tasks positions it as a critical player in gene expression regulation mechanisms.

Pathways	Nuclear Matrix Protein p84 influences vital cellular activities such as the cell cycle and DNA repair. Its connections are apparent in the regulation of the p53 signaling pathway where it interacts with several regulatory proteins to monitor cell cycle progression and stress responses. p84's activity also aligns with the DNA damage response pathway highlighting its cooperation with checkpoint proteins like ATM and ATR that uphold genomic integrity during cellular stress conditions.
Associated diseases and disorders	Aberrant Nuclear Matrix Protein p84 expression aligns with cancer and autoimmune conditions. In certain cancers deregulation of p84 can result in altered cell cycle control and resistance to apoptosis. Its interaction with p53 and other tumor suppressor proteins directly influences cancer cell survival and proliferation. Additionally altered p84 expression has connections to lupus specifically affecting the autoantigen properties and leading to immune system malfunctions. Understanding these connections helps scientists investigate therapeutic targets for associated diseases.

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

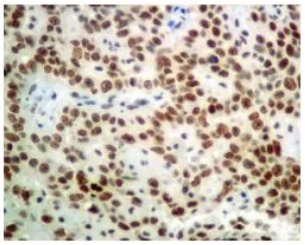
We do not recommend this combination. It is not covered by our product promise.

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.

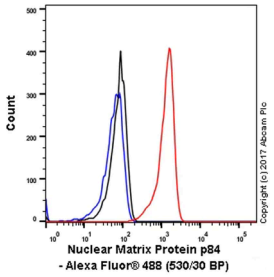
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)] (ab131268)

Nuclear Matrix Protein p84 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nuclear Matrix Protein p84 antibody

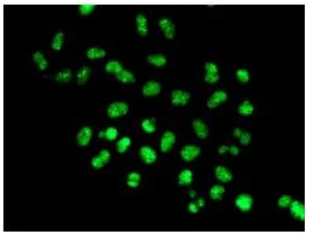
Immunohistochemical analysis of paraffin embedded human breast carcinoma tissue labeling Nuclear Matrix Protein p84 with ab131268 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)] (ab131268)

Nuclear Matrix Protein p84 Flow Cytometry (Intracellular) staining using rabbit Anti-Nuclear Matrix Protein p84 antibody

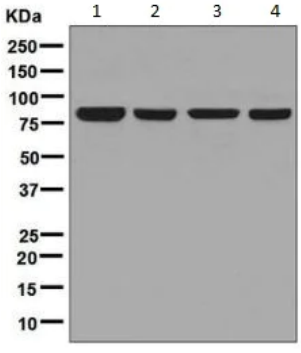
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Nuclear Matrix Protein p84 with purified ab131268 at 1/120 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)] (ab131268)

Nuclear Matrix Protein p84 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nuclear Matrix Protein p84 antibody

Immunofluorescent staining of HeLa cells labelling Nuclear Matrix Protein p84 with ab131268 at 1/100 dilution.



Western blot - Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)] (ab131268)

All lanes:
Western blot - Anti-Nuclear Matrix Protein p84 antibody [EPR5662(2)] (ab131268) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
U-87 MG cell lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Lane 4:
HepG2 cell lysate at 10 µg

Secondary

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

Predicted band size: 76 kDa

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