abcam

ab154802

Anti-MNAT1 antibody [EPR2555(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	EPR2555(2)
Purification technique	Affinity purification Protein A
Concentration	0.169 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.

Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information MNAT1

Function	Stabilizes the cyclin H-CDK7 complex to form a functional CDK-activating kinase (CAK) enzymatic complex. CAK activates the cyclin-associated kinases CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation. CAK complexed to the core-TFIIH basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminal domain (CTD) of its large subunit (POLR2A), allowing its

escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-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	The protein MNAT1 also known as menage à trois 1 functions as a component of the CDK-activating kinase complex. It weighs about 32 kilodaltons. MNAT1 plays a role in regulating cell cycle progression. It expresses widely in various tissues but shows higher levels in proliferating tissues due to its involvement in cell division. Its expression pattern suggests a significant function in maintaining proper cell cycle control.
Biological function summary	This protein serves as a regulatory subunit of the CDK7-cyclin H-MNAT1 complex. This complex forms the core of CDK-activating kinase which is essential for the activation of other cyclin-dependent kinases (CDKs). By doing so MNAT1 influences transcription regulation and DNA repair processes. As part of this complex MNAT1 modulates the activity of the proteins involved in a variety of cellular mechanisms. Through these activities MNAT1 helps in maintaining genomic integrity and proper cellular response to DNA damage.

Pathways	The activity of MNAT1 is involved in the cell cycle regulation pathway and the transcription regulation process. It plays a role in phosphorylating other CDKs directly influencing their activation and consequently cell cycle control. MNAT1 associates closely with proteins such as cyclin H and CDK7 within these pathways. This collaboration ensures that the essential checkpoints in the cell cycle are correctly regulated and that transcription processes are executed properly.
Associated diseases and disorders	Irregularities in MNAT1 function can correlate with cancer development due to its central role in cell cycle regulation and genomic stability. Altered expression levels or mutations in MNAT1 can disrupt normal cell division leading to unchecked cell proliferation. Furthermore MNAT1 interacts with cyclin H and CDK7 which are also important in the proper regulation of cell cycle checkpoints and can also influence cancer pathways when dysfunctional. Hence MNAT1 is a potential target for therapeutic strategies aiming to control abnormal cell growth.

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

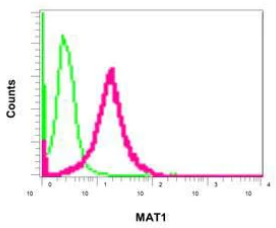
We do not recommend this combination. It is not covered by our product promise.

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.

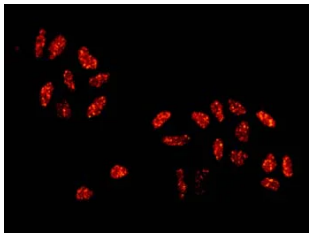
3 product images



Flow Cytometry (Intracellular) - Anti-MNAT1 antibody [EPR2555(2)] (ab154802)

MNAT1 Flow Cytometry (Intracellular) staining using rabbit Anti-MNAT1 antibody

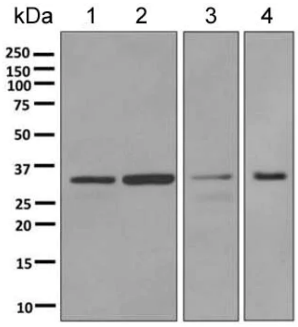
Intracellular flow cytometric analysis of permeabilized Hela cells labeling MAT1 with ab154802 at 1/10 dilution (red) or a negative rabbit IgG (green).



Immunocytochemistry/ Immunofluorescence - Anti-MNAT1 antibody [EPR2555(2)] (ab154802)

MNAT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MNAT1 antibody

Immunofluorescence analysis of HeLa cells labeling MAT1 with ab154802 at 1/100 dilution.



Western blot - Anti-MNAT1 antibody [EPR2555(2)] (ab154802)

All lanes:
Western blot - Anti-MNAT1 antibody [EPR2555(2)] (ab154802) at 1/1000 dilution

Lane 1:
A431 lysate at 10 µg

Lane 2:
HeLa lysate at 10 µg

Lane 3:
A673 lysate at 10 µg

Lane 4:
RAW264.7 lysate at 10 µg

Predicted band size: 36 kDa

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