abcam

ab181104

Anti-RNF20 antibody [EPR13562(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR13562(B)
Purification technique	Affinity purification Protein A
Concentration	1.702 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/2000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/290
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information RNF20

Function

Component of the RNF20/40 E3 ubiquitin-protein ligase complex that mediates monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1). H2BK120ub1 gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation (H3K4me and H3K79me, respectively). It thereby plays a central role inb histone code and gene regulation. The RNF20/40 complex forms a H2B ubiquitin ligase complex in cooperation with the E2 enzyme UBE2A or UBE2B; reports about the cooperation with UBE2E1/UBCH are contradictory. Required for transcriptional activation of Hox genes. Recruited to the MDM2 promoter, probably by being recruited by p53/TP53, and thereby acts as a transcriptional coactivator. Mediates the polyubiquitination of isoform 2 of PA2G4 in cancer cells leading to its proteasome-mediated degradation. (Microbial infection) Promotes the human herpesvirus 8 (KSHV) lytic cycle by inducing the expression of lytic viral genes including the latency switch gene RTA/ORF50.

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	RNF20 also known as BRE1A or E3 ubiquitin-protein ligase RNF20 mechanically functions as an E3 ligase that mediates ubiquitination. Its mass is approximately 110 kDa. RNF20 is expressed across various tissues with a high presence in the spleen and testis. It specifically adds ubiquitin to lysine residues on target histones leading to changes in chromatin structure and gene expression.
Biological function summary	RNF20 works within the ubiquitination system and forms part of the RNF20/RNF40 complex. This complex plays a role in the monoubiquitination of histone H2B at lysine 120 (H2BK120ub) a significant post-translational modification influencing transcriptional regulation. The modification aids in recruiting downstream effectors and is important for gene expression regulation and DNA damage repair mechanisms.
Pathways	RNF20 interacts with several cellular processes including the DNA damage response and transcriptional activation pathways. It significantly contributes to the DNA repair pathway by facilitating recruitment of repair proteins and is also involved in transcription regulation through the histone modification pathway. Furthermore RNF20 shows a functional relationship with RNF40 another E3 ligase in these pathways emphasizing its integrative role in cellular functioning.
Associated diseases and disorders	Disruptions in RNF20 activity have connections to cancer and neurodegenerative disorders. Altered RNF20 expression or mutations can influence tumor growth due to impaired regulation of gene expression and DNA repair impacting proteins like p53. Additionally in neurodegenerative disorders anomalies in RNF20-mediated ubiquitination can affect protein homeostasis linking to proteins involved in neuronal integrity and survival.

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.

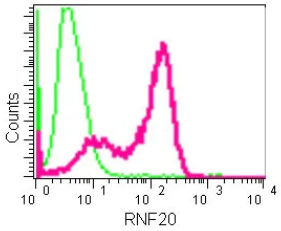
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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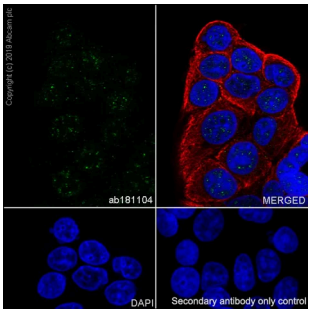
4 product images



Flow Cytometry (Intracellular) - Anti-RNF20 antibody [EPR13562(B)] (ab181104)

RNF20 Flow Cytometry (Intracellular) staining using rabbit Anti-RNF20 antibody

Intracellular Flow Cytometry analysis of 2% paraformaldehyde fixed Jurkat cells labeling RNF20 with ab181104 at 1/290 dilution (red) or a Rabbit monoclonal IgG Isotype control (green), followed by Goat anti rabbit IgG (FITC) at a 1/150 dilution.

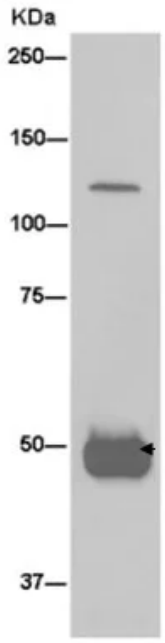


Immunocytochemistry/ Immunofluorescence - Anti-RNF20 antibody [EPR13562(B)] (ab181104)

RNF20 Immunocytochemistry/ Immunofluorescence staining of MCF7 (human breast adenocarcinoma epithelial cell) using rabbit Anti-RNF20 antibody

Immunofluorescent analysis of 100% Methanol-fixed, 0.1% TritonX-100 permeabilized MCF7 (human breast adenocarcinoma epithelial cell) cells labelling RNF20 with ab181104 at 1/200 (8.5 µg/ml) dilution, followed by ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary antibody at 1/1000 (2 µg/ml) dilution (Green). Confocal image showing nuclear staining in MCF7 cell line. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab195889 Anti-alpha

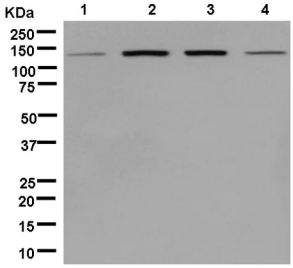
Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 µg/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary at 1/1000 (2 µg/ml) dilution.



Immunoprecipitation - Anti-RNF20 antibody [EPR13562(B)] (ab181104)

Western blot analysis on immunoprecipitation of 293 cell lysate labeling RNF20 using ab181104 at a 1/50 dilution and Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at a 1/1000 dilution and 5% NFDM/TBST blocking peptide.
All lanes:
Immunoprecipitation - Anti-RNF20 antibody [EPR13562(B)] (ab181104)

Predicted band size: 114 kDa



Western blot - Anti-RNF20 antibody [EPR13562(B)] (ab181104)

All lanes:
Western blot - Anti-RNF20 antibody [EPR13562(B)] (ab181104) at 1/5000 dilution

Lane 1:
Jurkat cell lysate at 20 µg

Lane 2:
293 cell lysate at 20 µg

Lane 3:
MCF-7 cell lysate at 20 µg

Lane 4:
HeLa cell lysate at 20 µg

Secondary

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

Predicted band size: 114 kDa

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