abcam

ab230951

Anti-FKBP52 antibody [EPR21125]

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	EPR21125
Purification technique	Affinity purification Protein A
Concentration	0.521 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Target data

See full target information FKBP4

Function Immunophilin protein with PPIase and co-chaperone activities. Component of steroid receptors heterocomplexes through interaction with heat-shock protein 90 (HSP90). May play a role in the intracellular trafficking of heterooligomeric forms of steroid hormone receptors between cytoplasm and nuclear compartments. The isomerase activity controls neuronal growth cones via regulation of TRPC1 channel opening. Also acts as a regulator of microtubule dynamics by inhibiting MAPT/TAU ability to promote microtubule assembly. May have a protective role against oxidative stress in mitochondria.

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	The immunophilin protein FKBP52 also known as FK506-binding protein 4 (FKBP4) weighs approximately 52 kDa. This protein acts as a peptidyl-prolyl cis-trans isomerase which assists in protein folding and stability. FKBP52 is widely expressed in cells with high levels in tissues like the brain testis and kidneys indicating its role in various cellular processes. As part of its mechanical role FKBP52 interacts with heat shock proteins aiding in the regulation of protein homeostasis.
Biological function summary	FKBP52 functions as a co-chaperone in steroid receptor complexes. It partners with heat shock protein 90 (HSP90) to form a functional complex that modulates the activity of steroid hormone receptors. These receptors such as the androgen and glucocorticoid receptors rely on FKBP52 for proper regulation and transport within the cell. FKBP52 also plays a part in cellular signaling influencing processes like cell growth and differentiation through its interaction with these receptors.
Pathways	FKBP52 features prominently in steroid hormone signaling and stress response pathways. It is critical to the maturation and transport of steroid hormone

	receptors directly affecting their downstream gene regulation. The protein interacts closely with HSP90 and other immunophilins like FKBP51 which also plays roles in similar pathways but may have differing regulatory effects. This interaction demonstrates how FKBP52's function integrates into broader cellular signaling networks influencing pathways like the glucocorticoid receptor signaling pathway.
Associated diseases and disorders	FKBP52 connects significantly to prostate cancer and Alzheimer's disease. In prostate cancer its modulation of androgen receptor activity is critical. Abnormal regulation of these receptors can contribute to cancer progression. Moreover in Alzheimer's disease FKBP52 influences the stability and function of tau protein which is linked to neurofibrillary tangle formation a hallmark of the disease. Its interaction with tau indicates a potential therapeutic target for intervention in Alzheimer's progression.

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

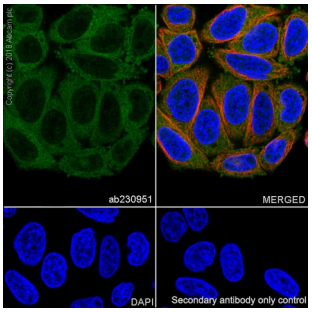
We do not recommend this combination. It is not covered by our product promise.

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

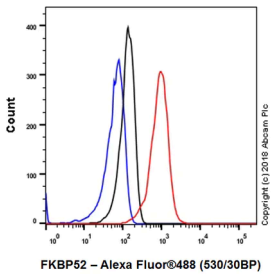


Immunocytochemistry/ Immunofluorescence - Anti-FKBP52 antibody [EPR21125] (ab230951)

FKBP52 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FKBP52 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling FKBP52 with ab230951 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and weakly nuclear staining in HeLa cell line.
Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red). The nuclear counter stain is DAPI (blue).

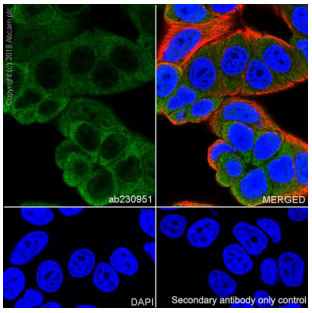
Secondary antibody only control: Used PBS instead of the primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-FKBP52 antibody [EPR21125] (ab230951)

FKBP52 Flow Cytometry (Intracellular) staining using rabbit Anti-FKBP52 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling FKBP52 with ab230951 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor¿½ 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

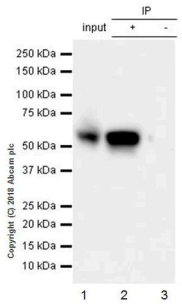


Immunocytochemistry/ Immunofluorescence - Anti-FKBP52 antibody [EPR21125] (ab230951)

FKBP52 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FKBP52 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF7 (human breast adenocarcinoma cell line) cells labeling FKBP52 with ab230951 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and weakly nuclear staining in MCF7 cell line.
Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red). The nuclear counter stain is DAPI (blue).

Secondary antibody only control: Used PBS instead of the primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Immunoprecipitation - Anti-FKBP52 antibody [EPR21125] (ab230951)

FKBP52 was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab230951 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab230951 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution.
Lane 1: HeLa whole cell lysate 10 µg (Input).

Lane 2: ab230951 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab230951 in HeLa whole cell lysate.

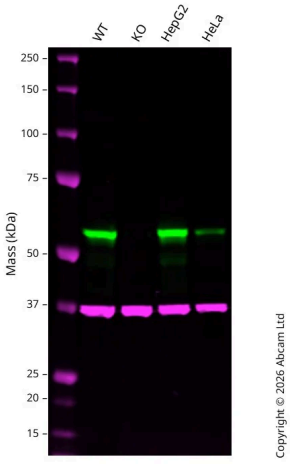
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

All lanes:
Immunoprecipitation - Anti-FKBP52 antibody [EPR21125] (ab230951)

Predicted band size: 52 kDa

Observed band size: 52 kDa



Western blot - Anti-FKBP52 antibody [EPR21125] (ab230951)

FKBP52 Western blot staining using rabbit Anti-FKBP52 antibody

Western blot: Anti-FKBP52 antibody [EPR21125] ab230951 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 55 kDa in Wild-type HCT 116 cell line with no signal observed at this size in FKBP4 knockout HCT 116 cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5% Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-FKBP52 antibody [EPR21125] (ab230951) at 1/1000 dilution

Lane 1:
Wild-type HCT 116 cell lysate at 20 µg

Lane 2:
Western blot - Human FKBP4 knockout HCT116 cell line (ab300946) at 20 µg

Lane 3:
LnCAP cell lysate at 20 µg

Lane 4:
THP-1 cell lysate at 20 µg

Secondary

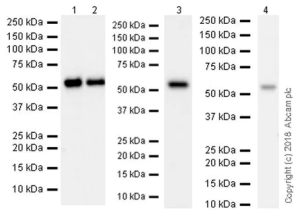
All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 52 kDa

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Observed band size: 55 kDa



Western blot - Anti-FKBP52 antibody [EPR21125] (ab230951)

Blocking/Diluting buffer: 5% NFDM/TBST.
Exposure times: Lane 1-2: 48 seconds; Lane 3: 30 seconds; Lane 4: 3 minutes.

The molecular mass observed is consistent with what has been described in the literature (PMID: 26065228).

Lanes 1 - 2:
Western blot - Anti-FKBP52 antibody [EPR21125] (ab230951) at 1/5000 dilution

Lanes 3 - 4:
Western blot - Anti-FKBP52 antibody [EPR21125] (ab230951) at 1/1000 dilution

Lane 1:
K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate at 20 µg

Lane 2:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 3:
HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 20 µg

Lane 4:
Human fetal brain lysate at 10 µg

Secondary

Lanes 1 - 3:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lane 4:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 52 kDa

Observed band size: 52 kDa

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