abcam

ab59460

Anti-FKBP52 antibody [Hi52C]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human FKBP4. The exact immunogen used to generate this antibody is proprietary information. Database link Q02790
Clone number	Hi52C
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

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

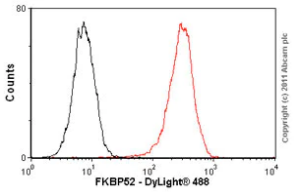
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

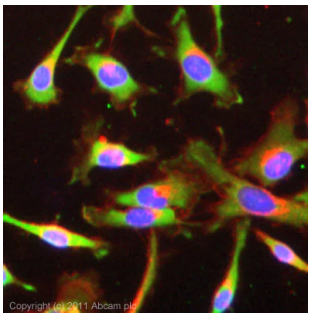


Flow Cytometry - Anti-FKBP52 antibody [Hi52C] (ab59460)

FKBP52 Flow Cytometry staining using mouse Anti-FKBP52 antibody

Overlay histogram showing HeLa cells stained with ab59460 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab59460, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Hela cells fixed with 4% paraformaldehyde (10

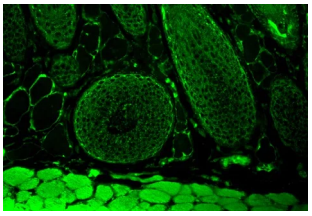
min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-FKBP52 antibody [Hi52C] (ab59460)

FKBP52 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-FKBP52 antibody

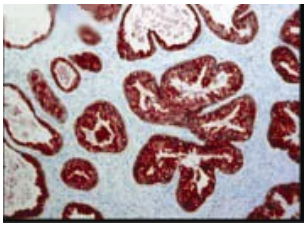
ICC/IF image of ab59460 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab59460, 10µg/ml) overnight at +4°C. The secondary antibody (green) was ab96879 Dylight 488 goat anti-mouse IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP52 antibody [Hi52C] (ab59460)

FKBP52 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-FKBP52 antibody

Paraffin-embedded mouse backskin tissue stained for FKBP52 using ab59460 at 1/100 dilution in immunohistochemical analysis.
Fixation: Bouin's Fixative. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1/50 dilution for 1 hour at room temperature.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP52 antibody [Hi52C] (ab59460)

ab59460 at 1/100 dilution staining FKBP52 in prostate tissue section by Immunohistochemistry (Bouin's fixative fixed paraffin-embedded tissue section). Antigen retrieval was done by microwave in citrate buffer. A HRP conjugated goat anti mouse secondary was used at 1/10 dilution.

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