abcam

Product datasheet

Anti-FKBP12 antibody ab2918

22 Abreviews 30 References 6 Images

Overview

Product name	Anti-FKBP12 antibody
Description	Rabbit polyclonal to FKBP12
Host species	Rabbit
Specificity	Detects FK506 binding protein 12 kDa (FKBP12).
Tested applications	**Suitable for:** IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rabbit, Cow, Xenopus laevis
Immunogen	Synthetic peptide corresponding to Human FKBP12 aa 1-13 (N terminal). Sequence: GVQVETISPGDGR (Peptide available as **ab4935**) Run BLAST with Run BLAST with
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Primary antibody notes	Immunophilins are a family of soluble receptors capable of binding to one of two major immunosuppressant agents; cyclosporin A (CsA) or FK506. Proteins that bind FK506 are termed

FK506 Binding Proteins (FKBPs) and those that bind cyclosporin A are called cyclophilins (CyP). Immunophilins function as cis-trans peptidyl-prolyl isomerases (PPIase) whose activity is inhibited by their respective immunosuppressant compounds. Thus, immunophilins accelerate folding of some proteins both in vivo and in vitro by catalyzing slow steps in the initial folding and rearrangement of proline-containing proteins. FKBP12:FK506 complexes inhibit calcineurin, a calcium/calmodulin-dependent serine/threonine phosphatase which blocks T-cell activation by preventing lymphokine gene transcription. FKBP12 also plays a role in intracellular calcium regulation by associating with three types of calcium release channel complexes, cardiac and skeletal ryanodine receptors and the inositol 1,4,5-trisphosphate receptor. In interactions with members of the TGF beta family type I receptors, FKBP12 has been shown to exert an inhibitory effect on the signaling pathway.

Clonality Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2918 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (3)	1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		Use a concentration of 1 µg/ml.

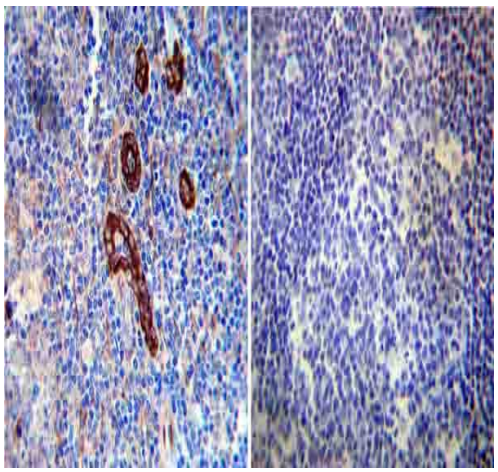
Target

Function May play a role in modulation of ryanodine receptor isoform-1 (RYR-1), a component of the calcium release channel of skeletal muscle sarcoplasmic reticulum. There are four molecules of FKBP12 per skeletal muscle RYR. PPIases accelerate the folding of proteins. It catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides.

Sequence similarities Belongs to the FKBP-type PPIase family. FKBP1 subfamily.
Contains 1 PPIase FKBP-type domain.

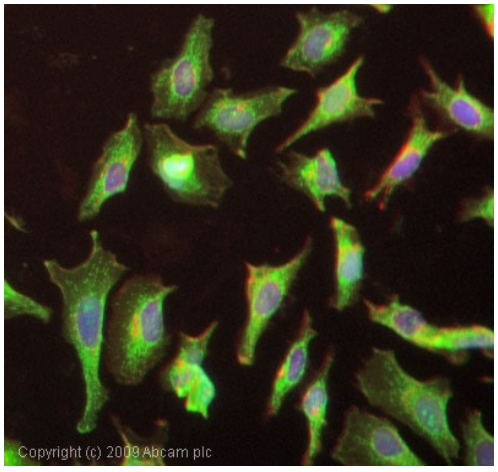
Cellular localization Cytoplasm.

Images



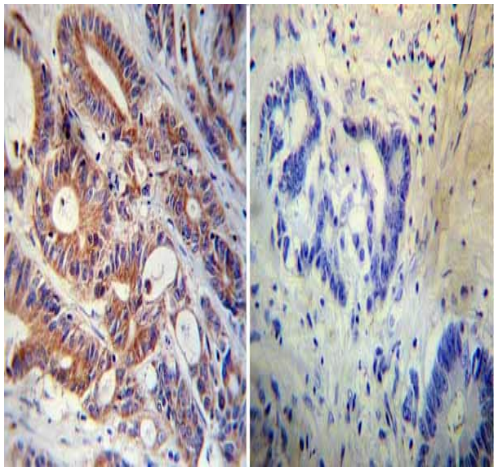
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP12 antibody (ab2918)

Immunohistochemistry was performed on normal biopsies of deparaffinized human tonsil tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1/50 with a rabbit polyclonal antibody recognizing FKBP12 (ab2918) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



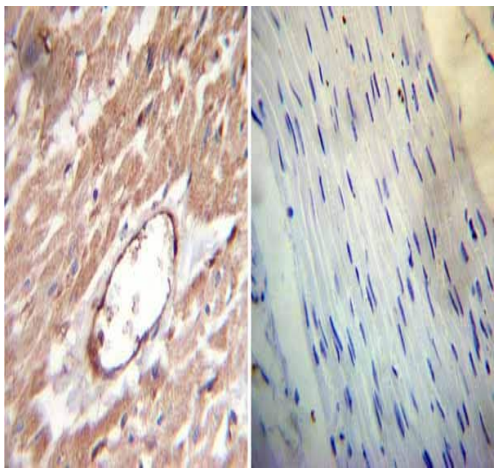
Immunocytochemistry/ Immunofluorescence - Anti-FKBP12 antibody (ab2918)

ICC/IF image of ab2918 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 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 (ab2918, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 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.



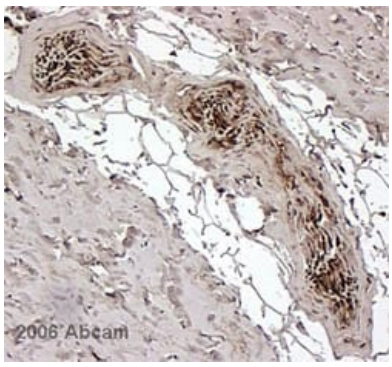
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP12 antibody (ab2918)

Immunohistochemistry was performed on cancer biopsies of deparaffinized human colon carcinoma tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1/200 with a rabbit polyclonal antibody recognizing FKBP12 (ab2918) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP12 antibody (ab2918)

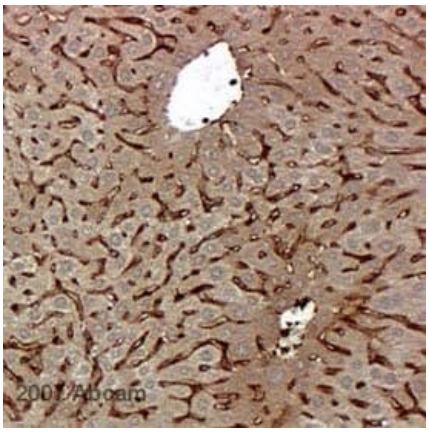
Immunohistochemistry was performed on normal biopsies of deparaffinized human heart tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1/20 with a rabbit polyclonal antibody recognizing FKBP12 (ab2918) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP12 antibody (ab2918)

This image is courtesy of an Abreview submitted by Miss gwen lagoda

ab2918 at 1/1000 staining FKBP12 from human penis tissue by IHC-P. The tissue was paraformaldehyde fixed and the slides were incubated in citrate buffer for antigen retrieval and heated for 20 minutes. The tissue was incubated with ab2918 for 24 hours. The secondary antibody used was part of the DAKO ENVISON System. The picture depicts staining of nerve fibers within corporal tissue of the human penis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FKBP12 antibody (ab2918)

This image is courtesy of an Abreview submitted by Miss gwen lagoda

ab2918 at 1/1000 staining mouse heart tissue sections by IHC-P. The tissue was paraformaldehyde fixed, blocked and then a citrate buffer / heat mediated antigen retireival step was performed. The tissue was incubated with the antibody for 24 hours. An HRP conjugated rabbit polyclonal antibody was used as the secondary.

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