abcam

ab137100

Anti-Staufen/STAU1 antibody [EPR7966]

Recombinant | RabMAb | 20ul selling size

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	EPR7966
Purification technique	Affinity purification Protein A
Concentration	0.51 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

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

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

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

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/250 - 1/500.**

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For unpurified use at 1/1000 - 1/10000.

Expected

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

Target data

See full target information STAU1

Function	Binds double-stranded RNA (regardless of the sequence) and tubulin. May play a role in specific positioning of mRNAs at given sites in the cell by cross-linking cytoskeletal and RNA components, and in stimulating their translation at the site. (Microbial infection) Plays a role in virus particles production of many viruses including of HIV-1, HERV-K, ebola virus and influenza virus. Acts by interacting with various viral proteins involved in particle budding process.

Storage

Shipped at conditions	Conditional Ambient
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	Staufen1 (STAU1) also known as Staufen double-stranded RNA binding protein 1 is an RNA-binding protein that plays a significant role in the regulation of mRNA localization stability and translation. It has a mass of approximately 58 kDa and is expressed in a variety of tissues including the brain testis and heart. STAU1 is known for binding to specific secondary structures in mRNA which influences the post-transcriptional gene regulation processes essential for cell function.
Biological function summary	Staufen1 participates in mRNA transport and localization within cells especially neurons. It forms part of a ribonucleoprotein complex which is involved in the movement of mRNA to distinct subcellular sites facilitating localized protein synthesis. This function is critical for the development and maintenance of cellular structures especially in cells with polarized functions such as neurons where precise protein localization is necessary for synaptic function and plasticity.
Pathways	Staufen1 is essential in processes related to mRNA decay and translation regulation. It is actively involved in the nonsense-mediated mRNA decay pathway ensuring the quality control of mRNA transcripts and preventing the synthesis of defective proteins. Additionally STAU1 interacts with proteins such as UPF1 an important player in this mRNA surveillance mechanism highlighting its role in ensuring accurate protein translation and cellular health.
Associated diseases and disorders	Abnormalities in STAU1 function have been associated with neurodegenerative diseases and muscular disorders. Its interaction with proteins like SMN responsible for motor neuron maintenance links STAU1 to spinal muscular atrophy. Similarly STAU1's role in the regulation of mRNA at synapses connects it to neuronal disorders including some forms of intellectual disability where local protein synthesis at synapses is disrupted.

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

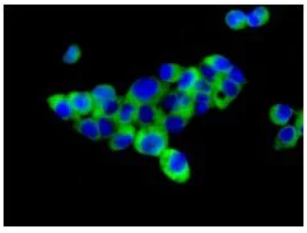
We do not recommend this combination. It is not covered by our product promise.

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.

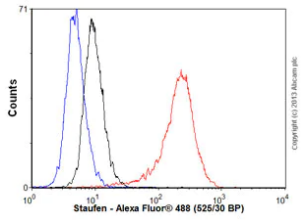
8 product images



Immunocytochemistry/ Immunofluorescence - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Staufen/STAU1 antibody

Immunofluorescent analysis of HepG2 cells labelling Staufen/STAU1 with ab137100 at 1/250 dilution.
This image was generated using the unpurified version of the product.

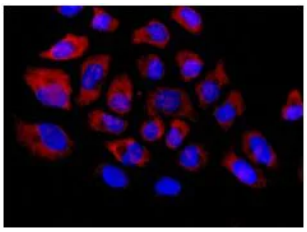


Flow Cytometry (Intracellular) - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Flow Cytometry (Intracellular) staining using rabbit Anti-Staufen/STAU1 antibody

Overlay histogram showing SHSY-5Y cells stained with ab137100 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab137100, 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SHSY-5Y cells

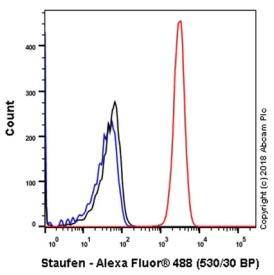
fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.
This image was generated using the unpurified version of the product.



Immunocytochemistry/ Immunofluorescence - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Staufen/STAU1 antibody

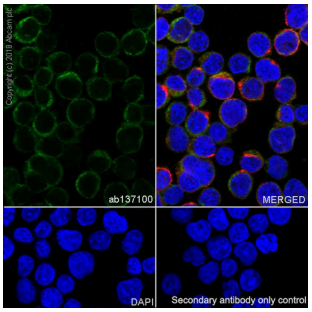
Immunofluorescent analysis of HeLa cells labelling Staufen/STAU1 with ab137100 at 1/250 dilution.
This image was generated using the unpurified version of the product.



Flow Cytometry (Intracellular) - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Flow Cytometry (Intracellular) staining using rabbit Anti-Staufen/STAU1 antibody

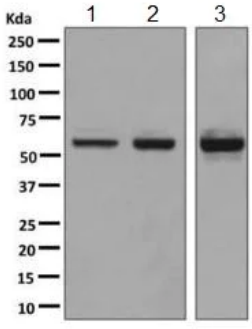
Intracellular Flow Cytometry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling Staufen/STAU1 with Purified ab137100 at 1/50 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Staufen/STAU1 antibody

Immunocytochemistry/ Immunofluorescence analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling Staufen/STAU1 with Purified ab137100 at 1:100 dilution (5.1 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

Staufen/STAU1 Western blot staining using rabbit Anti-Staufen/STAU1 antibody

This image was generated using the unpurified version of the product.
All lanes:
Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
K562 cell lysate at 10 µg

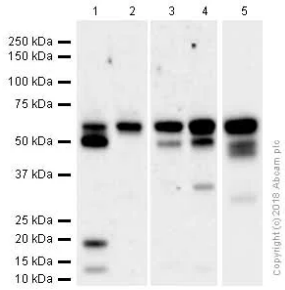
Lane 3:
HepG2 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 63 kDa

Observed band size: 55 kDa



Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

All lanes:
Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100) at 1/1000 dilution

Lane 1:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 3:
Mouse brain lysates at 20 µg

Lane 4:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates at 20 µg

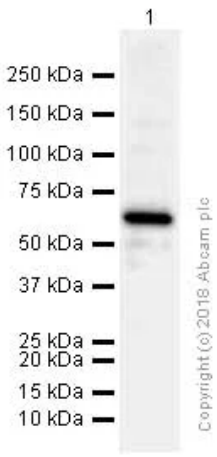
Lane 5:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 63 kDa

Observed band size: 55 kDa, 63 kDa



Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100)

All lanes:
Western blot - Anti-Staufen/STAU1 antibody [EPR7966] (ab137100) at 1/1000 dilution

All lanes:
Rat heart lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 63 kDa

Observed band size: 55 kDa, 63 kDa

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