abcam

ab307549

Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR25145-11
Purification technique	Affinity purification Protein A
Concentration	0.998 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	-

Flow Cyt (Intra)

Tested

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Human, Rat, Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human, Rat, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

Target data

See full target information SIGMAR1

Function	Functions in lipid transport from the endoplasmic reticulum and is involved in a wide array of cellular functions probably through regulation of the biogenesis of lipid microdomains at the plasma membrane. Involved in the regulation of different receptors it plays a role in BDNF signaling and EGF signaling. Also regulates ion channels like the potassium channel and could modulate neurotransmitter release. Plays a role in calcium signaling through modulation together with ANK2 of the ITP3R-dependent calcium efflux at the endoplasmic reticulum. Plays a role in several other cell functions including proliferation, survival and death. Originally identified for its ability to bind various psychoactive drugs it is involved in learning processes, memory and mood alteration (PubMed:16472803, PubMed:9341151). Necessary for proper mitochondrial axonal transport in motor neurons, in particular the retrograde movement of mitochondria. Plays a role in protecting cells against oxidative stress-induced cell death via its interaction with RNF112 (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

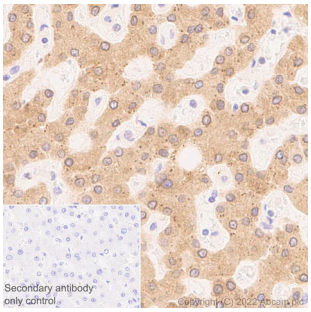
We do not recommend this combination. It is not covered by our product promise.

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.

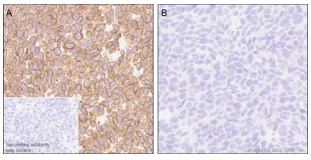
10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-Sigma1-receptor antibody

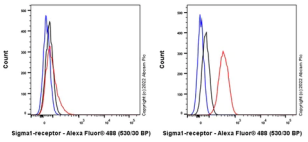
This data was developed using ab307548, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Sigma1-receptor with ab307548 at 1/1000 (0.533 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on human liver (PMID: 29399701).The section was incubated with ab307548 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Wild-type HEK-293T using rabbit Anti-Sigma1-receptor antibody

This data was developed using ab307548, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded (A) Wild-type HEK-29 tissue labeling Sigma1-receptor with ab307548 at 1/1000 (0.533 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on (A) Wild-type HEK-293T cell pellet, no staining on (B) SIGMAR1 knockout HEK-293T (ab266619) cell pellet.The section was incubated with ab307548 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

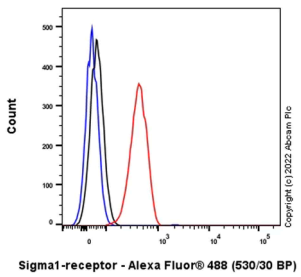


Flow Cytometry (Intracellular) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Flow Cytometry (Intracellular) staining of Wild-type 293T using rabbit Anti-Sigma1-receptor antibody

This data was developed using ab307548, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Wild-type 293T (human embryonic kidney epithelial cell, Right) / Sigma1-receptor knockout 293T (Left) cells labelling Sigma1-receptor with ab307548 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Positive staining on 293T cells (ab255449), while no staining on Sigma1-receptor knockout 293T cells (ab266619).

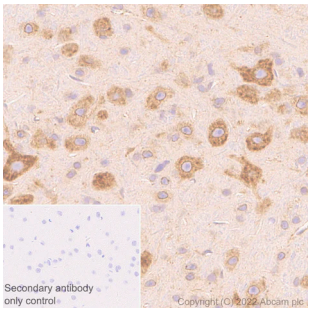


Flow Cytometry (Intracellular) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Flow Cytometry (Intracellular) staining of C6 (rat glial tumor glial cell) using rabbit Anti-Sigma1-receptor antibody

This data was developed using ab307548, the same antibody clone in a different buffer formulation.

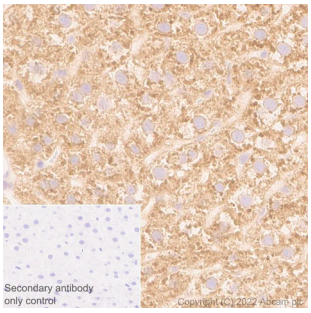
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized C6 (rat glial tumor glial cell) cells labelling Sigma1-receptor with ab307548 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cerebrum using rabbit Anti-Sigma1-receptor antibody

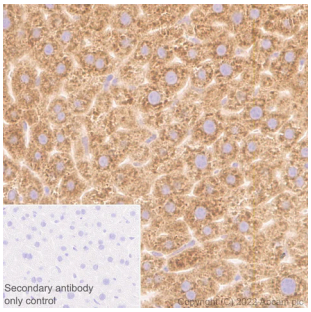
This data was developed using ab307548, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling Sigma1-receptor with ab307548 at 1/1000 (0.533 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse cerebrum (PMID: 31596232).The section was incubated with ab307548 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver using rabbit Anti-Sigma1-receptor antibody

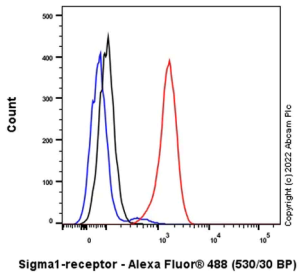
This data was developed using ab307548, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Sigma1-receptor with ab307548 at 1/1000 (0.533 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on rat liver.The section was incubated with ab307548 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-Sigma1-receptor antibody

This data was developed using ab307548, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Sigma1-receptor with ab307548 at 1/1000 (0.533 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on mouse liver. The section was incubated with ab307548 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

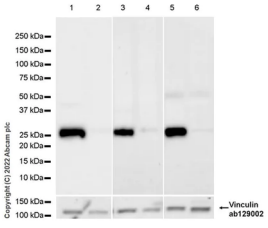


Flow Cytometry (Intracellular) - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Flow Cytometry (Intracellular) staining of NIH/3T3 (mouse embryonic fibroblast) using rabbit Anti-Sigma1-receptor antibody

This data was developed using ab307548, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling Sigma1-receptor with ab307548 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

This data was developed using 307548, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: Low expression: brain (PMID: 28350844), spleen (PMID: 28350844). Exposure time:
All lanes:
Western blot - Anti-Sigma1-receptor antibody [EPR25145-11] (ab307548) at 1/1000 dilution

Lane 1:
Mouse liver tissue lysate 20 µg

Lane 2:
Mouse brain tissue lysate 20 µg

Lane 3:
Rat liver tissue lysate 20 µg

Lane 4:
Rat brain tissue lysate 20 µg

Lane 5:
Human liver tissue lysate 20 µg

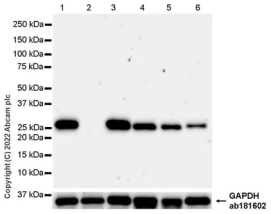
Lane 6:
Human spleen tissue lysate 20 µg

Secondary

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

Observed band size: 26 kDa

Exposure time: 8s



Western blot - Anti-Sigma1-receptor antibody [EPR25145-11] - BSA and Azide free (ab307549)

Sigma1-receptor Western blot staining using rabbit Anti-Sigma1-receptor antibody

This data was developed using 307548, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST Performed under reducing conditions. In Western blot, ab307548 was shown to bind specifically to SIGMAR1. A band was observed at 26 kDa in wild-type 293T cell lysates with whereas no signal observed at this size in SIGMAR1 knockout cell line ab266619 (knockout cell lysate ab258666). Exposure time: Lanes 1-2: 180 seconds; Lane 3: 136 seconds.
All lanes:
Western blot - Anti-Sigma1-receptor antibody [EPR25145-11] (ab307548) at 1/1000 dilution

Lane 1:
Wild-type HEK293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 2:
SIGMAR1 knockout HEK293T whole cell lysate at 20 µg

Lane 3:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

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

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

Lane 6:
C6 (rat glial tumor glial cell) whole cell lysate at 20 µg

Secondary

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

Performed under reducing conditions.

Observed band size: 26 kDa

Exposure time: 180s

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