

Product datasheet

Anti-Sigma1-receptor antibody [EPR23266-69] ab253192

KO VALIDATED Recombinant RabMAB[®]

11 Images

Overview

Product name	Anti-Sigma1-receptor antibody [EPR23266-69]
Description	Rabbit monoclonal [EPR23266-69] to Sigma1-receptor
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), WB, IHC-P Unsuitable for: ICC/IF or IP
Species reactivity	Reacts with: Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Caco-2, A375, U-87 MG, HEK-293 and HeLa whole cell lysates; HEK-293T transfected with Sigma1-receptor whole cell lysate; Rat brain, hippocampus, lung and kidney tissue lysates. IHC-P: Human spinal cord and liver tissue; Rat spinal cord and liver tissue. Flow Cyt (intra): HT-29 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number EPR23266-69

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab253192 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
Flow Cyt (Intra)		1/600.
WB		1/1000. Predicted molecular weight: 25 kDa.
IHC-P		1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for ICC/IF or IP.

Target

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.

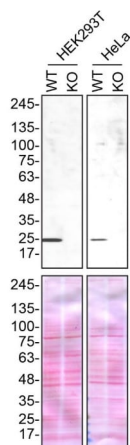
Tissue specificity Widely expressed with higher expression in liver, colon, prostate, placenta, small intestine, heart and pancreas. Expressed in the retina by retinal pigment epithelial cells.

Involvement in disease Amyotrophic lateral sclerosis 16, juvenile

Sequence similarities Belongs to the ERG2 family.

Cellular localization Nucleus inner membrane. Nucleus outer membrane. Endoplasmic reticulum membrane. Lipid droplet. Cell junction. Cell membrane. Cell projection > growth cone. Targeted to lipid droplets, cholesterol and galactosylceramide-enriched domains of the endoplasmic reticulum. Enriched at cell-cell communication regions, growth cone and postsynaptic structures. Localization is modulated by ligand-binding.

Images



Western blot - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

All lanes : Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192) at 1/5000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : Human SIGMAR1 (Sigma1-receptor) knockout HEK-293T cell lysate (**ab258666**)

Lane 3 : Wild-type HeLa cell lysate

Lane 4 : SIGMAR1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

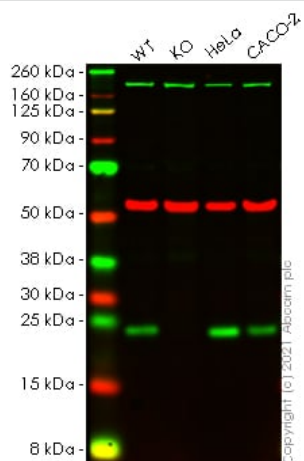
All lanes : goat anti-rabbit HRP at 0.2 µg/ml

Performed under reducing conditions.

Predicted band size: 25 kDa

ab253192 was shown to react with SIGMAR1 in wild-type HEK293T in Western blot with loss of signal observed in SIGMAR1 knockout cell line **ab266619** (SIGMAR1 knockout cell lysate **ab258666**). Wild-type HEK293T and HeLa cell lysates and the corresponding SIGMAR1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab253192 overnight at 4 °C at a 1/5000 dilution. Blots were incubated with goat anti-rabbit HRP secondary antibodies at 0.2µg/mL before imaging.

These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Western blot - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

All lanes : Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : SIGMAR1 knockout HEK-293T cell lysate

Lane 3 : HeLa cell lysate

Lane 4 : Caco-2 cell lysate

Lysates/proteins at 20 µg per lane.

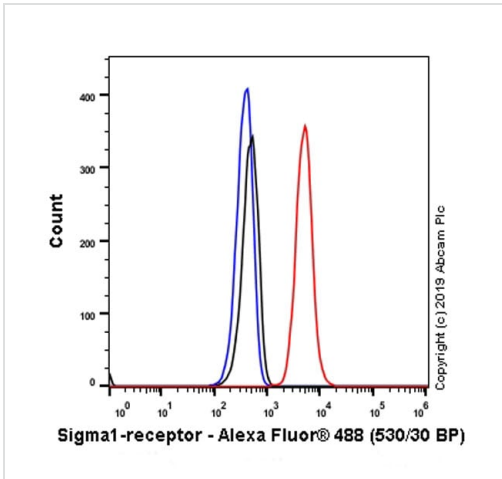
Performed under reducing conditions.

Predicted band size: 25 kDa

Observed band size: 24 kDa

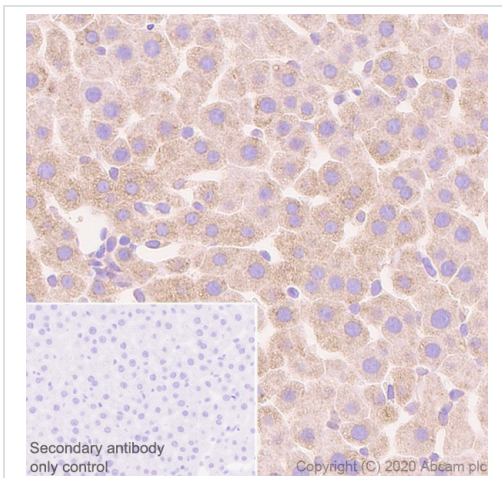
Lanes 1 - 4: Merged signal (red and green). Green - ab253192 observed at 24 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

ab253192 was shown to react with Sigma1-receptor in wild-type HEK-293T cells in Western blot with loss of signal observed in SIGMAR1 knockout cell line **ab266619** (SIGMAR1 knockout cell lysate **ab258666**). Wild-type HEK-293T and SIGMAR1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab253192 and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HT-29 (Human colorectal adenocarcinoma epithelial cell) cells labelling Sigma1-receptor with ab253192 at 1/600 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, **ab150077**) at 1/2000 dilution was used as the secondary antibody.

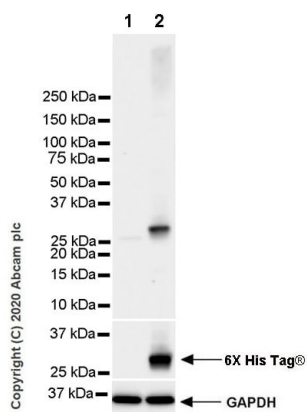


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Sigma1-receptor with ab253192 at 1/500 dilution (1.23 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat liver (PMID: 8954936). The section was incubated with ab253192 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 Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins



Western blot - Anti-Sigma1-receptor antibody
[EPR23266-69] (ab253192)

All lanes : Anti-Sigma1-receptor antibody [EPR23266-69]
(ab253192) at 1/1000 dilution

Lane 1 : HEK-293T (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate

Lane 2 : HEK-293T transfected with Sigma1-receptor (WT) expression vector containing a myc-His-tag®, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

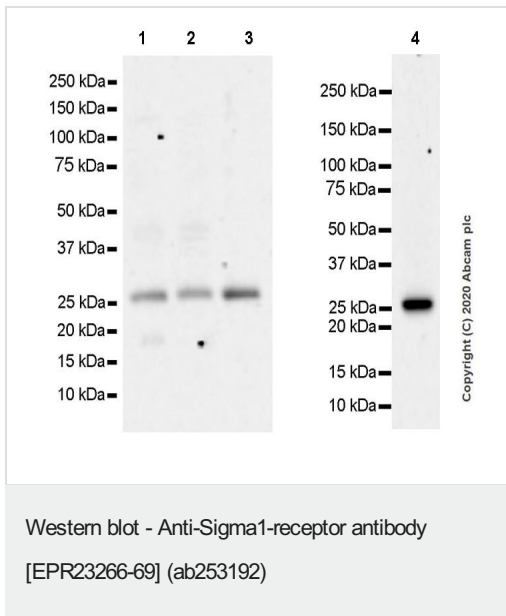
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated
([ab97051](#)) at 1/100000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

Exposure time: 3.25 seconds



All lanes : Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192) at 1/1000 dilution

Lane 1 : Rat brain tissue lysate

Lane 2 : Rat hippocampus tissue lysate

Lane 3 : Rat lung tissue lysate

Lane 4 : Rat kidney tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

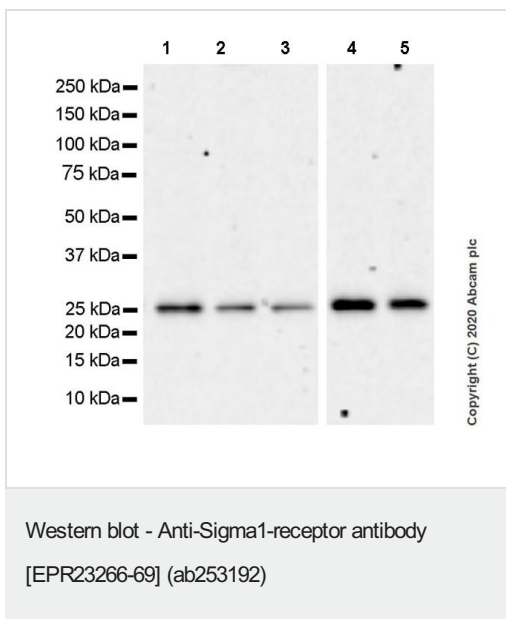
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Blocking and diluting buffer and concentration: 5% NFDm/TBST

Exposure time: 3 minutes



All lanes : Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192) at 1/1000 dilution

Lane 1 : Caco-2 (human colorectal adenocarcinoma epithelial cell), whole cell lysate

Lane 2 : A375 (human malignant melanoma epithelial cell), whole cell lysate

Lane 3 : U-87 MG (human glioblastoma-astrocytoma epithelial cell), whole cell lysate

Lane 4 : HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate

Lane 5 : 293T (human embryonic kidney epithelial cell), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

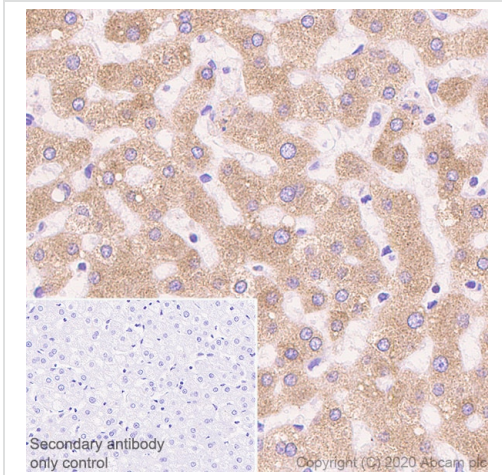
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 25 kDa

Observed band size: 25 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

Exposure time: 3 minutes

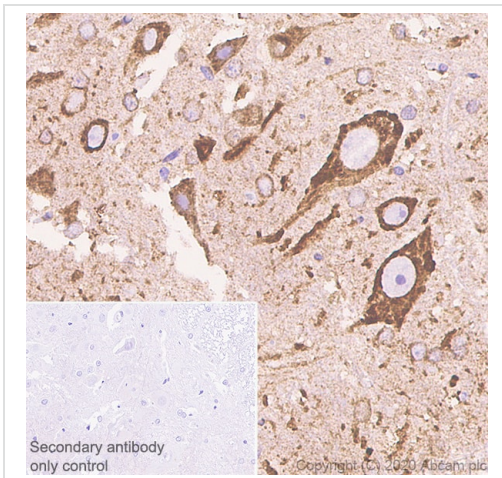


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Sigma1-receptor with ab253192 at 1/500 dilution (1.23 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human liver (PMID: 8954936). The section was incubated with ab253192 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 Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

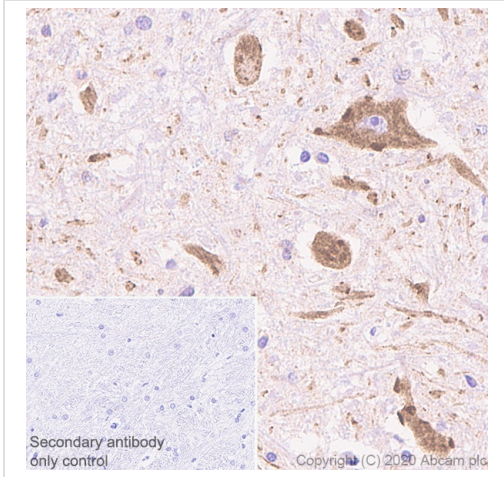


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Immunohistochemical analysis of paraffin-embedded Rat spinal cord tissue labeling Sigma1-receptor with ab253192 at 1/500 dilution (1.23 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat spinal cord (PMID: 23314020). The section was incubated with ab253192 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 Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins







Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Immunohistochemical analysis of paraffin-embedded Human spinal cord tissue labeling Sigma1-receptor with ab253192 at 1/500 dilution (1.23 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human spinal cord (PMID: 23314020). The section was incubated with ab253192 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 Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Sigma1-receptor antibody [EPR23266-69] (ab253192)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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