abcam

ab315452

Anti-CerS2 antibody [EPR28098-1]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR28098-1
Purification technique	Affinity purification Protein A
Concentration	0.526 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	Samples should not be boiled, as boiling may cause protein aggregation.

Species	Mouse

Dilution info	1/1000
Notes	Samples should not be boiled, as boiling may cause protein aggregation.

Species	Rat
Dilution info	1/1000
Notes	Samples should not be boiled, as boiling may cause protein aggregation.

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

IHC-Fr

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Expected

Species	Human, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

Target data

See full target information CERS2

Function

Ceramide synthase that catalyzes the transfer of the acyl chain from acyl-CoA to a sphingoid base, with high selectivity toward very-long-chain fatty acyl-CoA (chain length C22-C27) (PubMed:17977534, PubMed:18165233, PubMed:18541923, PubMed:19728861, PubMed:20937905, PubMed:22144673, PubMed:22661289, PubMed:26887952, PubMed:29632068). N-acylates sphinganine and sphingosine bases to form dihydroceramides and ceramides in de novo synthesis and salvage pathways, respectively (By similarity) (PubMed:17977534, PubMed:18165233, PubMed:18541923, PubMed:19728861, PubMed:20937905, PubMed:22144673, PubMed:22661289, PubMed:26887952, PubMed:29632068). Plays a non-redundant role in the synthesis of ceramides with very-long-chain fatty acids in kidney, liver and brain. Regulates the abundance of myelin-specific sphingolipids galactosylceramide and sulfatide that affects myelin sheath architecture and motor neuron functions (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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.

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

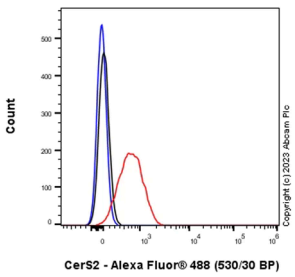
We do not recommend this combination. It is not covered by our product promise.

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.

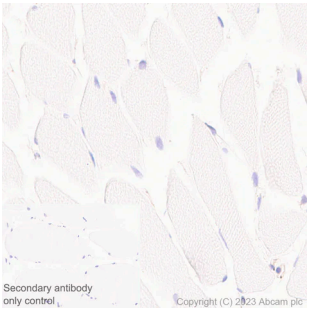
19 product images



Flow Cytometry (Intracellular) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling CerS2 with ab315452 at 1/50 dilution (1 ug)/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).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-CerS2 antibody

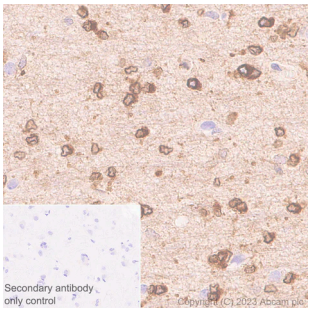
Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: no staining on human skeletal muscle. The section was incubated with ab315452 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).

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-CerS2 antibody [EPR28098-1] (ab315452)

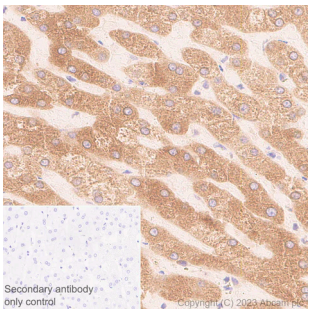
Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human cerebrum (PMID: 27255818; PMID: 35517425). The section was incubated with ab315452 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).

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-CerS2 antibody [EPR28098-1] (ab315452)

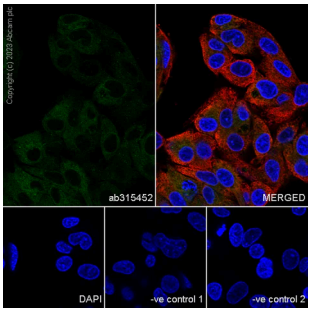
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human liver. The section was incubated with ab315452 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).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



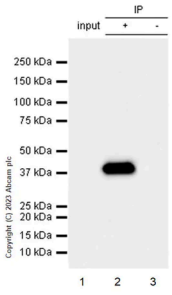
Immunocytochemistry/ Immunofluorescence - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Immunofluorescent analysis of 4% Paraformaldehyde fixed, 0.1% TritonX-100 permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling CerS2 with ab315452 at 1/50 (10.42 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in HepG2 cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

Anti-KDEL mouse monoclonal antibody was used to counterstain at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



Immunoprecipitation - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 was immunoprecipitated from 0.35 mg HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate with ab315452 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315452 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-CerS2 antibody [EPR28098-1] (ab315452) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate

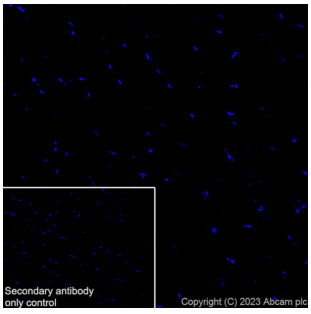
Lane 2:
ab315452 at 1/30 IP in HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab315452 in HepG2 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 10s



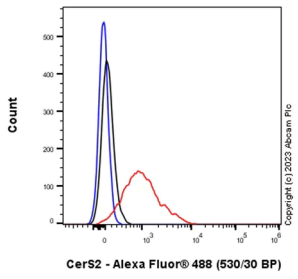
Immunohistochemistry (Frozen sections) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Immunohistochemistry (Frozen sections) staining of Mouse skeletal muscle (fresh frozen) using rabbit Anti-CerS2 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse skeletal muscle (fresh frozen) tissue labeling CerS2 with ab315452 at 1/100 (5.21 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution (Green).

Negative control: confocal image showing no staining on mouse skeletal muscle (PMID: 23591958). The nuclear counterstain was DAPI (Blue). The section was incubated with ab315452 for 60 mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

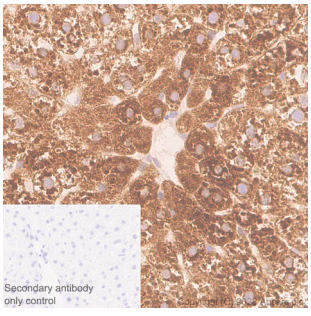
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 (2 ug/mL) dilution.



Flow Cytometry (Intracellular) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Hepa1-6 (mouse hepatoma epithelial cell) cells labelling CerS2 with ab315452 at 1/50 dilution (1 ug)/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).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

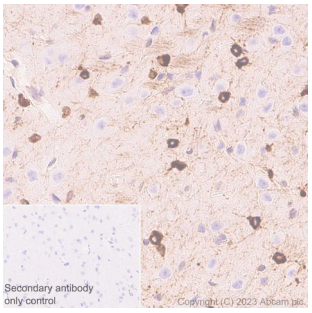
Positive staining on rat liver. The section was incubated with ab315452 for 30 mins at room temperature.

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).

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-CerS2 antibody [EPR28098-1] (ab315452)

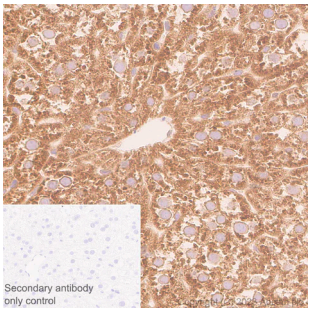
Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse cerebrum (PMID: 23591958). The section was incubated with ab315452 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).

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-CerS2 antibody [EPR28098-1] (ab315452)

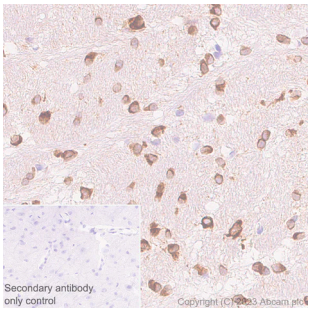
Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse liver. The section was incubated with ab315452 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).

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-CerS2 antibody [EPR28098-1] (ab315452)

Immunohistochemical analysis of paraffin-embedded Rat cerebrum tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

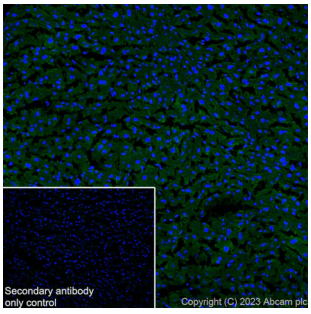
Positive staining on rat cerebrum. The section was incubated with ab315452 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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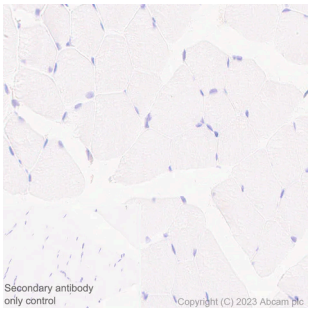


Immunohistochemistry (Frozen sections) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse liver (fresh frozen) tissue labeling CerS2 with ab315452 at 1/100 (5.21 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution (Green).

Confocal image showing positive staining on mouse liver. The nuclear counterstain was DAPI (Blue). The section was incubated with ab315452 for 60 mins at room temperature. The section was then mounted using Fluoromount®.The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 (2 ug/mL) dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat skeletal muscle using rabbit Anti-CerS2 antibody

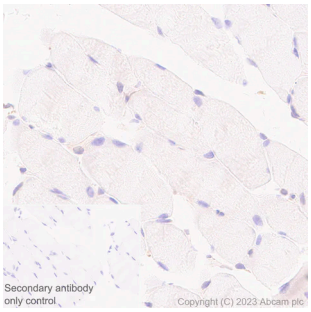
Immunohistochemical analysis of paraffin-embedded Rat skeletal muscle tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: no staining on rat skeletal muscle. The section was incubated with ab315452 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).

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-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse skeletal muscle using rabbit Anti-CerS2 antibody

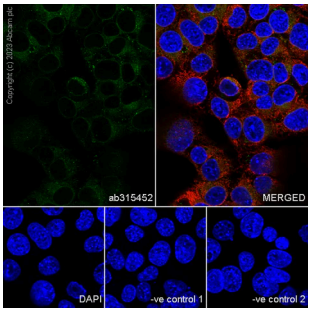
Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling CerS2 with ab315452 at 1/2000 (0.261 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: no staining on mouse skeletal muscle (PMID: 23591958; PMID: 15823095). The section was incubated with ab315452 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).

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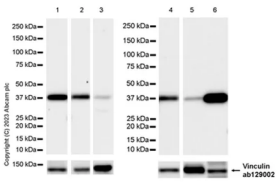
Immunocytochemistry/ Immunofluorescence - Anti-CerS2 antibody [EPR28098-1] (ab315452)

Immunofluorescent analysis of 4% Paraformaldehyde fixed, 0.1% TritonX-100 permeabilized Hepa1-6 (mouse hepatoma epithelial cell) cells labelling CerS2 with ab315452 at 1/50 (10.42 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confoncal image showing cytoplasmic staining in Hepa1-6 cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

Anti-KDEL mouse monoclonal antibody was used to counterstain at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Western blot staining using rabbit Anti-CerS2 antibody

Low expression: heart (PMID: 23591958).

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-Vinculin antibody [EPR8185] (ab129002) staining at 1/10000 dilution.

Samples should not be boiled, as boiling may cause protein aggregation.

All lanes:

Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellar carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
Mouse brain tissue lysate at 20 µg

Lane 3:
Mouse heart tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat heart tissue lysate at 20 µg

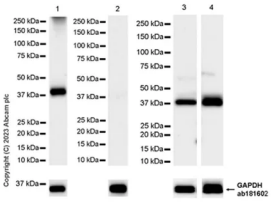
Lane 6:
Hepa1-6 (mouse hepatoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Observed band size: 40 kDa, 124 kDa

Exposure time: 15s



Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Western blot staining using rabbit Anti-CerS2 antibody

Low expression: skeletal muscle (PMID: 23591958).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lanes 1-2: 48 seconds; Lanes 3-4: 15 seconds.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Samples should not be boiled, as boiling may cause protein aggregation.

All lanes:
Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452) at 1/1000 dilution

Lane 1:
Human liver tissue lysate at 20 µg

Lane 2:
Human skeletal muscle tissue lysate at 20 µg

Lane 3:
Human lung tissue lysate at 20 µg

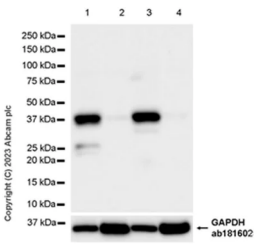
Lane 4:
Human brain tissue lysate at 20 µg

Secondary

All lanes:

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

Observed band size: 40 kDa, 36 kDa



Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452)

CerS2 Western blot staining using rabbit Anti-CerS2 antibody

Low expression: skeletal muscle (PMID: 23591958).

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Samples should not be boiled, as boiling may cause protein aggregation.

All lanes:
Western blot - Anti-CerS2 antibody [EPR28098-1] (ab315452) at 1/1000 dilution

Lane 1:
Mouse liver tissue lysate at 20 µg

Lane 2:
Mouse skeletal muscle tissue lysate at 20 µg

Lane 3:
Rat liver tissue lysate at 20 µg

Lane 4:
Rat skeletal muscle tissue lysate at 20 µg

Secondary

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

Observed band size: 40 kDa, 36 kDa

Exposure time: 15s

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