abcam

ab92544

Anti-LRP1 antibody [EPR3724]

Anti-LRP1 antibody [EPR3724] (ab92544) is a rabbit monoclonal antibody detecting LRP1 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Pig, Rat**.

- Clone EPR3724 is the most cited clone to LRP1
- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 190 publications

Recombinant | RabMAb | KO Validated | 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	EPR3724
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	**For unpurified use at 1/5000 - 1/10000.** Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

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

IP

Tested

Species	Human
Dilution info	1/30
Notes	**For unpurified use at 1/50.**

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/50000
Notes	**For unpurified use at 1/20000 - 1/50000.**

Species	Rat
Dilution info	1/50000

Notes	**For unpurified use at 1/20000 - 1/50000.**

Species	Pig
Dilution info	1/50000
Notes	**For unpurified use at 1/20000 - 1/50000.**

Species	Human
Dilution info	1/50000
Notes	**For unpurified use at 1/20000 - 1/50000.**

ICC/IF

Tested

Species	Rat
Dilution info	1/100
Notes	**For unpurified use at 1/5000 - 1/10000.**

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/5000 - 1/10000.**

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	For unpurified use at 1/1000.ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information LRP1

Function

Endocytic receptor involved in endocytosis and in phagocytosis of apoptotic cells (PubMed:11907044, PubMed:12713657). Required for early embryonic development (By similarity). Involved in cellular lipid homeostasis. Involved in the plasma clearance of chylomicron remnants and activated LRPAP1 (alpha 2-macroglobulin), as well as the local metabolism of complexes between plasminogen activators and their endogenous inhibitors. Acts as an LRPAP1 alpha-2-macroglobulin receptor (PubMed:1702392, PubMed:26142438). Acts as TAU/MAPT receptor and controls the endocytosis of TAU/MAPT as well as its subsequent spread (PubMed:32296178). May modulate cellular events, such as APP metabolism, kinase-dependent intracellular signaling, neuronal calcium signaling as well as neurotransmission (PubMed:12888553). Also acts as a receptor for IGFBP3 to mediate cell growth inhibition (PubMed:9252371). (Microbial infection) Functions as a receptor for Pseudomonas aeruginosa exotoxin A.

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

Anti-LRP1 antibody [EPR3724] (ab92544) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P, IP, WB in human, mouse, pig, rat samples.

Anti-LRP1 antibody [EPR3724] (ab92544) has been cited over 194 times in peer reviewed journals and is trusted by the scientific community.

Abcams high quality manufacturing and validation processes ensure Anti-LRP1 antibody [EPR3724] (ab92544) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

The specificity of Anti-LRP1 antibody [EPR3724] (ab92544) has been confirmed by testing in knockout samples.

Anti-LRP1 antibody [EPR3724] (ab92544) has 9 independent reviews from customers.

Anti-LRP1 antibody [EPR3724] (ab92544) specifically detects LRP1 (UniProt ID: Q07954; Molecular weight: 503kDa) and is sold in a convenient trial size to enable initial testing (20 uL) and larger sizes for subsequent scaling up experiments (100 uL and 1 mL).

Conjugation-ready, carrier free format available for antibody clone EPR3724 - ab215997.

Antibody clone EPR3724 is also available pre-conjugated to a variety of labels for your convenience - HRP, APC, PE, Alexa Fluor® 568, Alexa Fluor® 555 (ab195569, ab31885, ab31941, ab312965, ab313174).

Low-density lipoprotein receptor-related protein (LRP) is a versatile receptor that plays a crucial role in various physiological functions, including lipid metabolism, endocytosis, and cellular signaling. It is particularly important in the clearance of amyloid-beta peptides, which are linked to Alzheimer's disease (AD). Changes in LRP expression or function are associated with a range of diseases, such as cardiovascular diseases, neurodegenerative disorders like AD, and certain types of cancer. Studying LRP provides valuable insights into its role in these conditions and the underlying mechanisms, underscoring its significance in disease pathology research.

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.

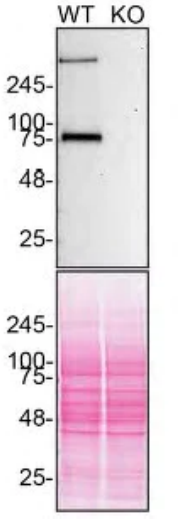
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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19 product images



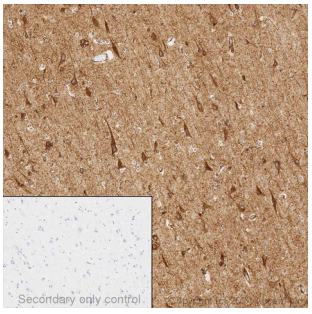
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

ab92544 was shown to react with LRP1 in wild-type HAP1 cells in Western blot with loss of signal observed in a LRP1 knockout cell line. Wild-type HAP1 and LRP1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab92544 overnight at 4 °C at a 1/50000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/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.
All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544) at 1/50000 dilution

Lane 1:
Wild-type HAP1 lysate at 30 µg

Lane 2:
LRP1 knock-out HAP1 lysate at 30 µg

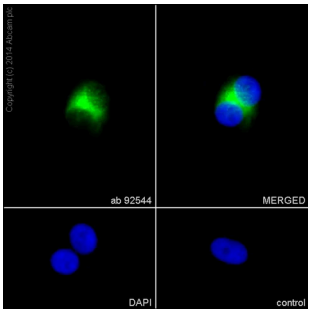


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

Immunohistochemical analysis of formalin fixed paraffin embedded human testis labelling LRP1 with ab92544 at a concentration of 0.26µg/ml. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with a Bond™ Polymer Refine Detection kit. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20mins.

ab92544 anti-LRP1 antibody [EPR3724] was incubated for 15mins at room temperature. Sections were counterstained with Hematoxylin. Image inset shows absence of staining in secondary antibody only control.

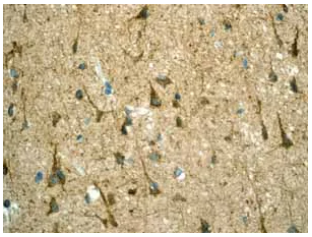
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)



Immunocytochemistry/ Immunofluorescence - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LRP1 antibody

Immunocytochemistry/Immunofluorescence analysis of U87-MG cells labelling LRP1 with purified ab92544 at 1/100. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/100) and secondary antibody, ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

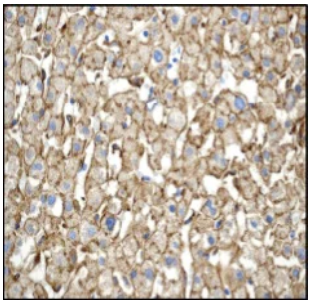


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LRP1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of normal human brain tissue labelling LRP1 with unpurified ab92544.

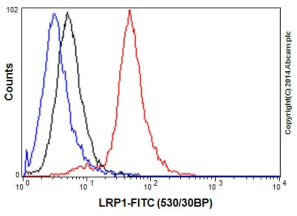
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LRP1 antibody

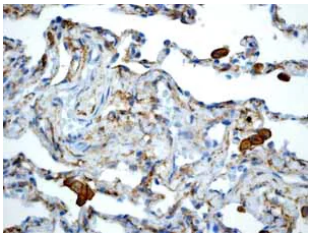
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labelling LRP1 with unpurified ab92544 at 1/100.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Flow Cytometry (Intracellular) staining using rabbit Anti-LRP1 antibody

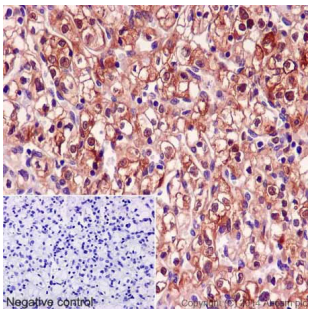
Intracellular Flow Cytometry analysis of Jurkat cells labelling LRP1 with purified ab92544 at 1/100 (red). Cells were fixed with 2% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LRP1 antibody

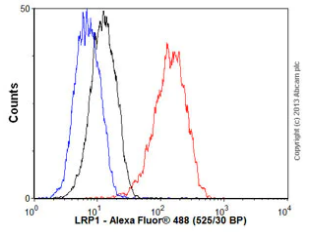
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of normal human lung tissue labelling LRP1 with unpurified ab92544.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LRP1 antibody

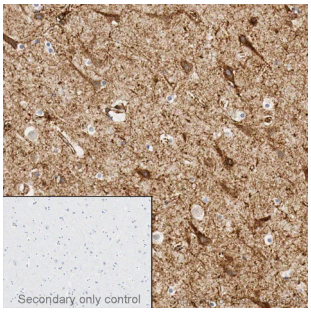
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human clear cell carcinoma of the kidney tissue labelling LRP1 with purified ab92544 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Flow Cytometry (Intracellular) staining using rabbit Anti-LRP1 antibody

Overlay histogram showing Jurkat cells stained with unpurified ab92544 (red line). The cells were fixed with 80% methanol (5 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 (ab92544, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluorr® 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) (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.

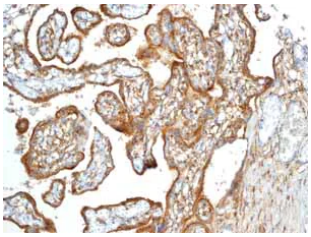


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

Immunohistochemical analysis of formalin fixed paraffin embedded human testis labelling LRP1 with ab92544 at a concentration of 0.26µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH8.5 for 32mins.

ab92544 anti-LRP1 antibody [EPR3724] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control

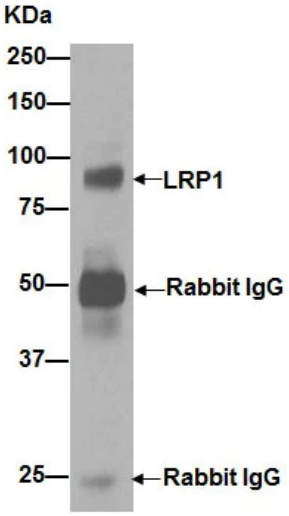
Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LRP1 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of normal human placenta tissue labelling LRP1 with unpurified ab92544.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunoprecipitation - Anti-LRP1 antibody [EPR3724] (ab92544)

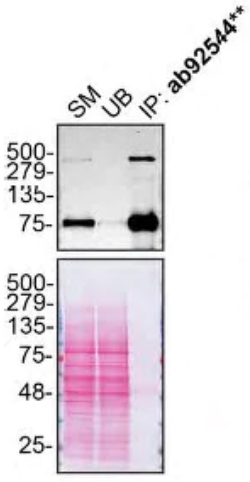
ab92544 (purified) at 1/30 immunoprecipitating LRP1 in A549 cell lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000). Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Immunoprecipitation - Anti-LRP1 antibody [EPR3724] (ab92544)

Predicted band size: 504 kDa

Observed band size: 85 kDa

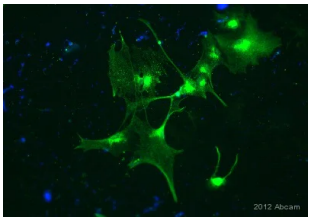


Immunoprecipitation - Anti-LRP1 antibody [EPR3724] (ab92544)

Immunoprecipitation of LRP1 in HAP1 cells. Lysates were prepared and immunoprecipitation was performed using 2.0 µg of ab92544 pre-coupled to Protein A beads. Samples were then washed and processed for western blot.

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.
All lanes:
Immunoprecipitation - Anti-LRP1 antibody [EPR3724] (ab92544) at 2 µg

All lanes:
HAP1 cells

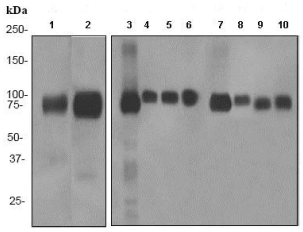


This image is courtesy of a customer review submitted by Ruma Raha-Chowdhury.

Immunocytochemistry/ Immunofluorescence - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LRP1 antibody

ICC/IF image of LRP1 staining on rat mixed glia culture using unpurified ab92544 (1:200). The cells were fixed using paraformaldehyde. The cells were then permeabilised using 0.1% TritonX in 0.1% PBS. Non-specific protein was blocked using 10% donkey serum at 24°C for 1 hour. ab92544 was diluted (1/200) using 0.1% TritonX with 0.1% PBS and 10% donkey serum and the cells were incubated for 4 hours at 24°C. The secondary antibody used was donkey polyclonal to Rabbit IgG conjugated to Alexa Fluor® 488. DAPI was used to stain the nucleus.



Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544) at 1/20000 dilution

Lane 1:
Human PMBC lysate at 10 µg

Lane 2:
A549 lysate at 10 µg

Lane 3:
Mouse brain lysate at 10 µg

Lane 4:
Mouse heart lysate at 10 µg

Lane 5:
Mouse kidney lysate at 10 µg

Lane 6:
Mouse spleen lysate at 10 µg

Lane 7:
Rat brain lysate at 10 µg

Lane 8:
Rat heart lysate at 10 µg

Lane 9:
Rat kidney lysate at 10 µg

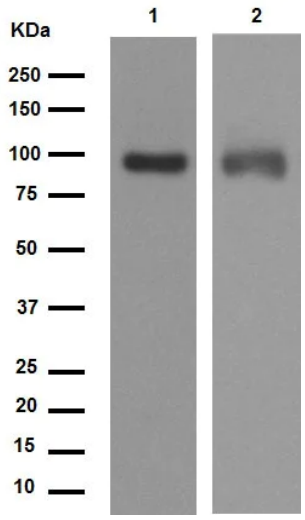
Lane 10:
Rat spleen lysate at 10 µg

Secondary

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

Predicted band size: 504 kDa

Observed band size: 85 kDa



Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

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

All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544) at 1/50000 dilution

Lane 1:
A549 cell lysate at 20 µg

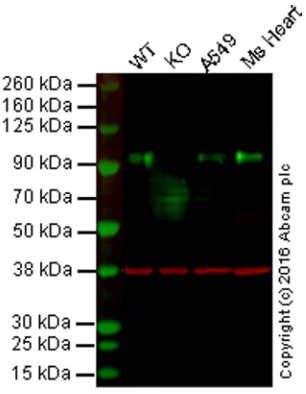
Lane 2:
Human fetal brain tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 504 kDa

Observed band size: 85 kDa



Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Western blot staining using rabbit Anti-LRP1 antibody

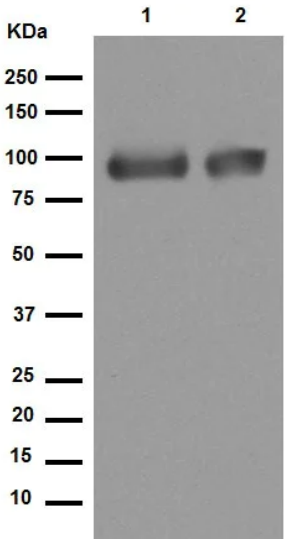
Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: LRP1 knockout HAP1 cell lysate (20 µg)
Lane 3: A549 cell lysate (20 µg)
Lane 4: Mouse heart tissue lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab92544 observed at 92 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab92544 was shown to specifically react with LRP1 in wild-type HAP1 cells. No band was observed when LRP1 knockout samples were used. Wild-type and LRP1 knockout samples were subjected to SDS-PAGE. ab92544 and ab8245 (loading control to GAPDH) were diluted at 1/5000 and 1/10,000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

Predicted band size: 504 kDa



Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

LRP1 Western blot staining using rabbit Anti-LRP1 antibody

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

All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544) at 1/50000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

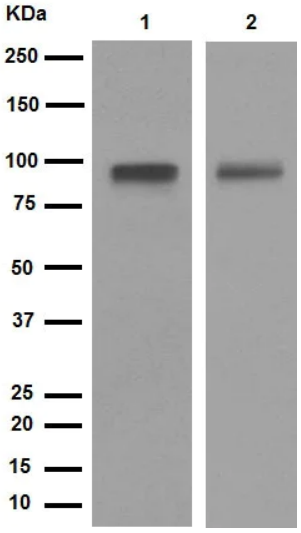
Lane 2:
Rat brain tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 504 kDa

Observed band size: 85 kDa



Western blot - Anti-LRP1 antibody [EPR3724] (ab92544)

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

All lanes:
Western blot - Anti-LRP1 antibody [EPR3724] (ab92544) at 1/50000 dilution

Lane 1:
Pig liver tissue lysate at 10 µg

Lane 2:
Pig heart tissue lysate at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 504 kDa

Observed band size: 85 kDa

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