abcam

ab124767

Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker

Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) is a rabbit monoclonal antibody detecting M6PR (cation independent) in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 70 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	EPR6599
Purification technique	Affinity purification Protein A
Dissociation constant	3.9 x 10^{-12} M
Concentration	0.888 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/250 - 1/500
Notes	Heat up to 98°C, below boiling, and then let cool for 10-20 min. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/250 - 1/500
Notes	Heat up to 98°C, below boiling, and then let cool for 10-20 min. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Human
Dilution info	1/250 - 1/500
Notes	Heat up to 98°C, below boiling, and then let cool for 10-20 min. Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

WB

Tested

Species	Rat
Dilution info	1/50000 - 1/200000
Notes	-

Species	Human
Dilution info	1/50000 - 1/200000
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information IGF2R

Function Mediates the transport of phosphorylated lysosomal enzymes from the Golgi complex and the cell surface to lysosomes (PubMed:18817523, PubMed:2963003). Lysosomal enzymes bearing phosphomannosyl residues bind specifically to

mannose-6-phosphate receptors in the Golgi apparatus and the resulting receptor-ligand complex is transported to an acidic prelysosomal compartment where the low pH mediates the dissociation of the complex (PubMed:18817523, PubMed:2963003). The receptor is then recycled back to the Golgi for another round of trafficking through its binding to the retromer (PubMed:18817523). This receptor also binds IGF2 (PubMed:18046459). Acts as a positive regulator of T-cell coactivation by binding DPP4 (PubMed:10900005).

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	Stable for 12 months at -20°C

Notes

Product Specifications
Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P, WB in human, mouse, rat samples.
Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) specifically detects M6PR (cation independent) (UniProt ID: P11717; Molecular weight: 270kDa) and is sold in 100 µL and 1 mL selling sizes.

Quality and Validation
Abcam's high quality manufacturing and validation processes ensure Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.
The specificity of Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) has been confirmed by testing in knockout samples.
Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) has been cited over 72 times in peer reviewed journals and is trusted by the scientific community.
Anti-M6PR (cation independent) antibody [EPR6599] (ab124767) has 7 independent reviews from customers.

Related Products
Antibody clone EPR6599 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, Alexa Fluor® 647, Alexa Fluor® 405, Alexa Fluor® 594, Alexa Fluor® 555, APC, PE (ab184807, ab198324, ab198515, ab203437, ab203438, ab225131, ab225132).
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

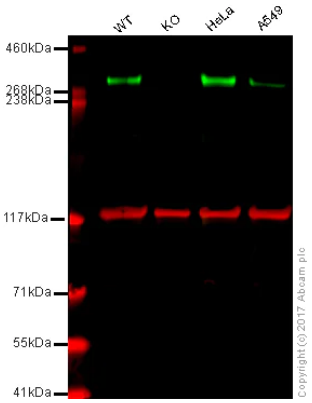
We do not recommend this combination. It is not covered by our product promise.

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.

15 product images



Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Western blot staining using rabbit Anti-M6PR (cation independent) antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: M6PR (cation independent) knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: A549 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab124767 observed at 274 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab124767 was shown to specifically react with M6PR (cation independent) in wild-type HAP1 cells as signal was lost in M6PR (cation independent) knockout cells. Wild-type and M6PR (cation independent) knockout samples were subjected to SDS-PAGE. ab124767 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/50000 dilution and 1/20000 dilution respectively. Blots were developed 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 1/10000 dilution for 1 hour at room temperature before imaging.

Lane 1:
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

Lanes 2 - 4:
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - BSA and Azide free (ab226090) at 1/50000 dilution

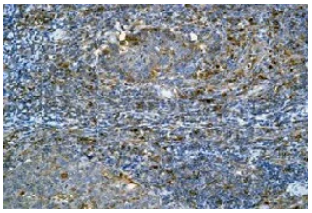
Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
M6PR (cation independent) knockout HAP1 whole cell lysate at 20 µg

Lane 3:
HeLa whole cell lysate at 20 µg

Lane 4:
A549 whole cell lysate at 20 µg

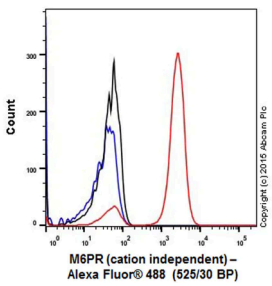
Predicted band size: 274 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-M6PR (cation independent) antibody

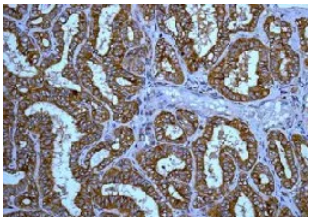
Immunohistochemical analysis of formalin fixed, paraffin embedded Human tonsil tissue section labelling Mannose 6 Phosphate Receptor (Cation independent) with unpurified ab124767 at dilution of 1/250.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Flow Cytometry (Intracellular) staining using rabbit Anti-M6PR (cation independent) antibody

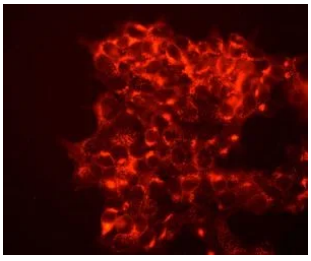
Intracellular Flow Cytometry analysis of Jurkat (human acute T cell leukemia) cells labelling M6PR with purified ab124767 at 1/150 (red). Cells were fixed with 4% paraformaldehyde. Alexa Fluorr® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-M6PR (cation independent) antibody

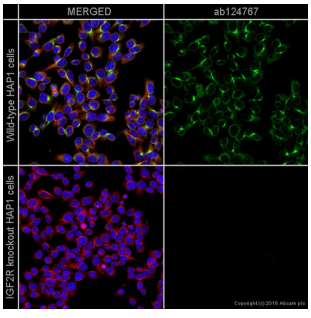
Immunohistochemical analysis of formalin fixed, paraffin embedded Human papillary carcinoma tissue section labelling Mannose 6 Phosphate Receptor (Cation independent) with unpurified ab124767 at dilution of 1/250.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-M6PR (cation independent) antibody

Immunocytochemistry/immunofluorescence analysis of 293T cells labelling Mannose 6 Phosphate Receptor (Cation independent) with unpurified ab124767 at dilution of 1/100.

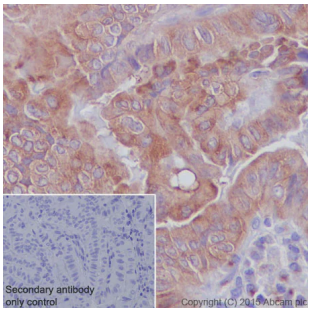


Immunocytochemistry/ Immunofluorescence - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-M6PR (cation independent) antibody

ab124767 staining M6PR in wild-type HAP1 cells (top panel) and IGF2R knockout HAP1 cells (bottom panel). The cells were fixed with 100% MeOH for 5 min. , permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab124767 at 1µg/ml and ab195889 (Mouse monoclonal [DM1A] to alpha Tubulin - Microtubule Marker (Alexa Fluor® 594)) at 1/250 dilution (shown in pseudocolour red) overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.

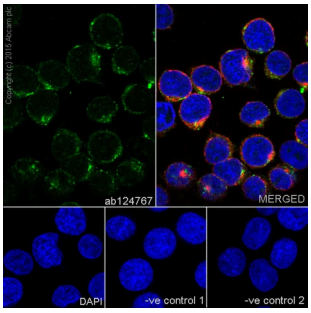
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-M6PR (cation independent) antibody

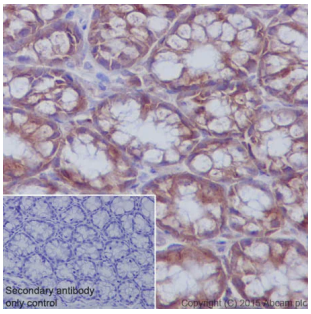
Immunohistochemical staining of paraffin embedded human thyroid carcinoma tissue section labelling M6PR with purified ab124767 at dilution of 1/500. The secondary antibody used was ab97051 Goat Anti-Rabbit IgG H&L (HRP), at a dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Immunocytochemistry/ Immunofluorescence - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-M6PR (cation independent) antibody

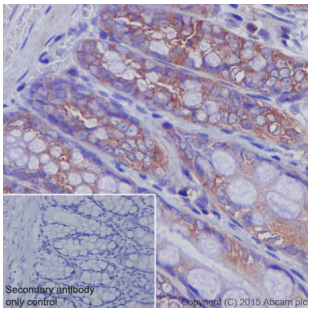
Immunocytochemistry/Immunofluorescence analysis of Jurkat (human acute T cell leukemia) cells labelling M6PR with purified ab124767 at 1/100. Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. The cells were co-stained with ab7291, a mouse anti-tubulin antibody (1/1000) using ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) as the secondary. Nuclei couterstained with DAPI (blue).
For negative control 1, rabbit primary antibody was used, followed by anti-mouse secondary antibody (ab150120). For negative control 2, mouse primary antibody (ab7291) was used followed by anti-rabbit secondary antibody (ab150077).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-M6PR (cation independent) antibody

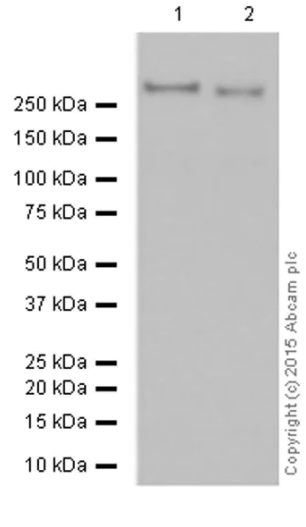
Immunohistochemical staining of paraffin embedded mouse colon tissue section labelling M6PR with purified ab124767 at dilution of 1/500. The secondary antibody used was ab97051 Goat Anti-Rabbit IgG H&L (HRP), at a dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-M6PR (cation independent) antibody

Immunohistochemical staining of paraffin embedded rat colon tissue section labelling M6PR with purified ab124767 at dilution of 1/500. The secondary antibody used was ab97051 Goat Anti-Rabbit IgG H&L (HRP), at a dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Western blot staining using rabbit Anti-M6PR (cation independent) antibody

Blocking and diluting buffer 5% NFDM/TBST
All lanes:
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767) at 1/200000 dilution

Lane 1:
Jurkat (human acute T cell leukemia) whole cell lysate at 20 µg

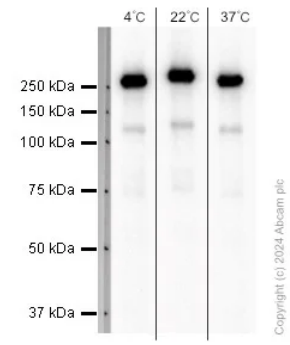
Lane 2:
HEK293 (human embryonic kidney) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 274 kDa

Observed band size: 300 kDa



Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Western blot staining of Jurkat whole cell lysate using rabbit Anti-M6PR (cation independent) antibody

This blot was produced using 6% SDS-PAGE containing 15 µg of Jurkat whole cell lysate per lane at 150V for 1hr before being transferred onto a 0.45 µm PVDF membrane at 72V for 90 minutes. The membrane was then blocked for 1hr using 5% NFDM/TBST, then incubated with ab124767 (1/50,000) at room temperature for 1hr. After being washed three times in TBST, the membrane was incubated with Peroxidase conjugated goat anti-rabbit IgG (H+L) (ab97051) at 1/20,000 dilution for 1hr at room temperature. The membrane was washed three times again. Then the signal was developed using the ECL technique. ab124767 was stored at a range of temperatures (+4°C, +22°C, +37°C) for 1 week before being tested in WB. The image shows the band intensity remains relatively constant across all storage temperatures, demonstrating that antibody activity is not affected.
All lanes:

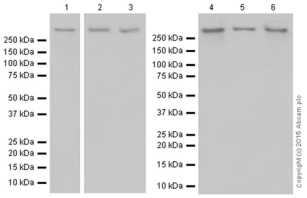
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767) at 1/50000 dilution

All lanes:
Jurkat whole cell lysate at 15 µg with NDFM/TBST

Secondary

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

Exposure time: 60s



Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Western blot staining using rabbit Anti-M6PR (cation independent) antibody

Blocking and diluting buffer 5% NFDM/TBST
All lanes:
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767) at 1/50000 dilution

Lane 1:
C6 (rat glioma) whole cell lysate at 20 µg

Lane 2:
PC-12 (rat adrenal gland pheochromocytoma) whole cell lysates at 20 µg

Lane 3:
NIH/3T3 (mouse embryo) whole cell lysate at 20 µg

Lane 4:
Mouse heart tissue lysate at 20 µg

Lane 5:
Mouse kidney tissue lysate at 20 µg

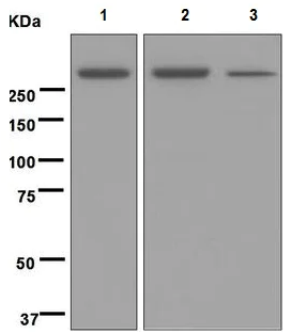
Lane 6:
Mouse spleen tissue lysate at 20 µg

Secondary

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

Predicted band size: 100 kDa, 107 kDa, 183 kDa, 274 kDa, 35 kDa

Observed band size: 120 kDa, 300 kDa, 43 kDa



Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

M6PR (cation independent) Western blot staining using rabbit Anti-M6PR (cation independent) antibody

All lanes:
Western blot - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767) at 1/50000 dilution

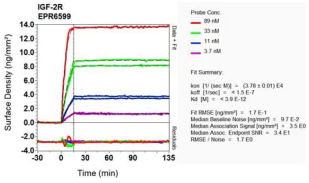
Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
Caco-2 cell lysate at 10 µg

Secondary

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



OI-RD Scanning - Anti-M6PR (cation independent) antibody [EPR6599] - Lysosome Membrane Marker (ab124767)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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