abcam

ab269311

PE Anti-M6PR (cation independent) antibody [MEM-240] - Lysosome Membrane Marker

Anti-M6PR (cation independent) antibody [MEM-240] conjugated to PE - suitable for flow cytometry, intracellular flow cytometry, and reacts with human samples. Clone [MEM-240] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Virus preparation containing IGF2R protein. The exact immunogen used to generate this antibody is proprietary information. Database link P11717
Clone number	MEM-240
Purification technique	Size-exclusion chromatography
Specificity	ab69311 recognizes an extracellular epitope between amino acids 698-1262.
Purification notes	The purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	Or 100 µL of whole blood.

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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The cation-independent mannose 6-phosphate receptor (M6PR) is an important player in cellular transport mechanisms. Also known as the insulin-like growth factor 2 receptor (IGF2R) this protein weighs approximately 300 kDa. M6PR is present on the membrane of lysosomes and works as a lysosome membrane marker. It functions as a sorting receptor in the Golgi apparatus and endosomes facilitating the transport of lysosomal enzymes from the Golgi to lysosomes and back for function and degradation.

Biological function summary	The M6PR enables essential cellular processes by mediating the trafficking of enzymes important to lysosomal function. This receptor takes part in recognizing and binding proteins tagged with mannose 6-phosphate signals allowing their transport to lysosomes. IGF2R engages in forming transient complexes with these enzymes within the cellular trafficking circuitry therefore ensuring the proper delivery of enzyme cargo to its target destination.
Pathways	M6PR fits importantly within lysosomal enzyme transport and the insulin-like growth factor (IGF) pathway. It partially regulates the homeostasis of IGF2 by facilitating its degradation modulating cell proliferation growth and development. Steric interactions with IGF2 and other proteins like mannose receptor homologs and IGF-binding proteins outline its influence within these pathways highlighting its multifunctionality.
Associated diseases and disorders	M6PR connects to certain cancers and lysosomal storage disorders. Dysfunctional pathway interactions or mutations within IGF2R often relate with types of cancer such as breast and liver cancers due to its influence on IGF2 regulation and cell proliferation. Additionally it associates with lysosomal storage diseases as lysosome-related pathologies emerge from impaired enzyme transport reflecting the M6PR's intricate role in cellular homeostasis.

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

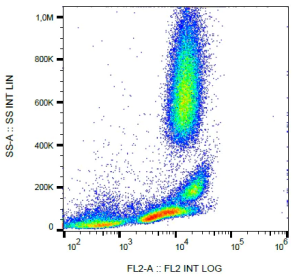
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - PE Anti-M6PR (cation independent) antibody [MEM-240] - Lysosome Membrane Marker (ab269311)

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

Flow cytometry detection of M6PR (cation independent) in human peripheral blood labeling M6PR (cation independent) with ab269311.

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