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Recombinant Anti-NPC1 Rabbit mAb

Catalog # AP95252

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	O15118
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	142167

Additional Information

Gene ID	4864
Other Names	Niemann-Pick C1 protein
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human NPC1 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

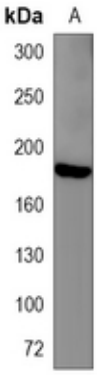
Protein Information

Name	NPC1 (HGNC:7897)
Function	Intracellular cholesterol transporter which acts in concert with NPC2 and plays an important role in the egress of cholesterol from the endosomal/lysosomal compartment (PubMed:10821832, PubMed:12554680, PubMed:18772377, PubMed:27238017, PubMed:9211849, PubMed:9927649). Unesterified cholesterol that has been released from LDLs in the lumen of the late endosomes/lysosomes is transferred by NPC2 to the cholesterol-binding pocket in the N-terminal domain of NPC1 (PubMed:18772377, PubMed:19563754, PubMed:27238017, PubMed:27378690, PubMed:28784760, PubMed:9211849, PubMed:9927649). Cholesterol binds to NPC1 with the hydroxyl group buried in the binding pocket (PubMed:19563754). Mediates cholesterol transfer from lysosomes to endoplasmic reticulum by tethering endosomal/lysosomal compartments and endoplasmic reticulum membrane contact sites where it interacts with sterol transport protein GRAMD1B (PubMed:31537798). Binds oxysterol with higher affinity than cholesterol. May play a role in vesicular trafficking in glia, a process that may be crucial for maintaining the structural and functional integrity of nerve terminals (Probable). Inhibits cholesterol-mediated mTORC1

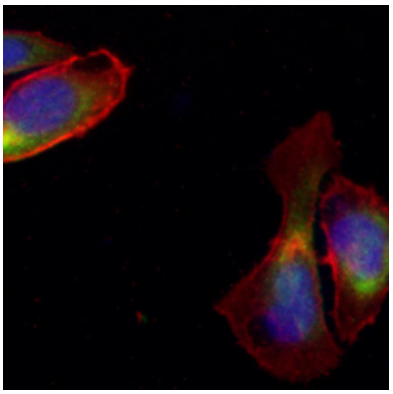
activation throught its interaction with SLC38A9 (PubMed:28336668).

Cellular Location Late endosome membrane; Multi-pass membrane protein. Lysosome membrane; Multi-pass membrane protein

Images



Western blot analysis of NPC1 expression in HepG2 (A) whole cell lysates. (Predicted band size: 142 kD; Observed band size: 180 kD)



Immunofluorescent analysis of NPC1 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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