

NPC1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP13472c**Specification**

NPC1 Antibody (Center) Blocking peptide - Product InformationPrimary Accession [O15118](#)**NPC1 Antibody (Center) Blocking peptide - Additional Information****Gene ID** 4864**Other Names**

Niemann-Pick C1 protein, NPC1

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13472c was selected from the Center region of NPC1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NPC1 Antibody (Center) Blocking peptide - 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:9211849, PubMed:9927649, PubMed:10821832, PubMed:18772377, PubMed:27238017, PubMed:12554680). 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:9211849, PubMed:9927649, PubMed:18772377).

PubMed:19563754,
PubMed:27238017,
PubMed:28784760,
PubMed:27378690).
Cholesterol binds to NPC1 with the hydroxyl group buried in the binding pocket (PubMed:19563754). 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 through its interaction with SLC38A9 (PubMed:28336668).

Cellular Location

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

NPC1 Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

NPC1 Antibody (Center) Blocking peptide - Images

NPC1 Antibody (Center) Blocking peptide - Background

This gene encodes a large protein that resides in the limiting membrane of endosomes and lysosomes and mediates intracellular cholesterol trafficking via binding of cholesterol to its N-terminal domain. It is predicted to have a cytoplasmic C-terminus, 13 transmembrane domains, and 3 large loops in the lumen of the endosome - the last loop being at the N-terminus. This protein transports low-density lipoproteins to late endosomal/lysosomal compartments where they are hydrolyzed and released as free cholesterol. Defects in this gene cause Niemann-Pick type C disease, a rare autosomal recessive neurodegenerative disorder characterized by over accumulation of cholesterol and glycosphingolipids in late endosomal/lysosomal compartments.

NPC1 Antibody (Center) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Fontaine-Bisson, B., et al. Diabetologia 53(10):2155-2162(2010) Kagedal, K., et al. Biochim. Biophys. Acta 1801(8):831-838(2010) Rodriguez-Rodriguez, E., et al. J. Alzheimers Dis. 21(2):619-625(2010) Ma, W., et al. BMC Med. Genet. 11, 149 (2010) :