Qty: 100 µg/200 µl
Mouse anti-NPC1
Catalog No. 35-1500Z
Lot No.

Mouse anti-NPC1

FORM
This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 17B5 **ISOTYPE:** Mouse IgG_1

IMMUNOGEN
Fragments of Human NPC1 conjugated to a carrier protein.

SPECIFICITY
This antibody reacts with the human NPC1 protein.

REACTIVITY
Reactivity is confirmed with an NPC1 transfected I1061T cell line.

Sample	Immuno-precipitation (native)	Immuno-fluorescence	Western Blotting
Human	+++	+++	+++
Mouse	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable NA, Not determined ND)

Please note that in Western blot assays, the protein samples should not be boiled prior to loading onto the gel. For a full Western blot protocol, please contact tech_support@invitrogen.com

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Immunoprecipitation: 5-10 µg/per IP reaction
Western Blotting: 1-2 µg/ml
Immunofluorescence: 10 µg/ml

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Niemann-Pick C1 (NPC1) disease is characterized by cholesterol accumulation in lysosomes and aberrant feedback regulation of cellular cholesterol homeostasis. The gene responsible for the disease is NPC1, which encodes a protein with five transmembrane domains. NPC1 protein has homology with the resistance-nodulation-division (RND) family of prokaryotic permeases and may normally function as a transmembrane efflux pump. NPC1 uses a proton motive force to remove accumulated acriflavine from the endosomal/lysosomal (E/L) system. NPC1 can function to transport lipophilic molecules but not cholesterol, out of the E/L system. The fact that NPC1 can transport acriflavine and fatty acids suggest that this permease may have a "multidrug" transport function, part of which is its housekeeping role in cellular cholesterol homeostasis. Expression of NPC1 in E.Coli facilitated the transport of acriflavine across the plasma membrane, causing cytosolic accumulation and resulting in transport of oleic acid, but not cholesterol-oleate across the plasma membrane, establishing NPC1 as a eukaryotic member of the RND permease family.

REFERENCES

1. Davies J., et. al. Transmembrane Molecular Pump Activity of Niemann-Pick C1 Protein. *Science* 290:2295 – 2298 (2000).

RELATED PRODUCTS

Product	***Clone/PAD****	***Cat. No.***
Mouse anti-GluR2	6C4	32-0300
Mouse anti-GluR4	ZTS4	51-3100
Mouse anti-Glutamate Transporter	35-A9	32-1000
Protein A	Sepharose® 4B	10-1041
rec-Protein	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	**ZyMAX™ Goat x Rabbit IgG (H+L)**	**ZyMAX™ Goat x Mouse IgG (H+L)**
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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