

LMBRD1 Antibody

Catalog # ASC11233

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9NUN5
Other Accession	NP_060838 , 261878497
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	61389
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LMBRD1 antibody can be used for detection of LMBRD1 by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

Additional Information

Gene ID	55788
Other Names	Probable lysosomal cobalamin transporter, HDAG-L-interacting protein NESI, LMBR1 domain-containing protein 1, Nuclear export signal-interacting protein, LMBRD1, C6orf209, NESI
Target/Specificity	LMBRD1;
Reconstitution & Storage	LMBRD1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LMBRD1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LMBRD1 (HGNC:23038)
Synonyms	C6orf209, NESI
Function	Lysosomal membrane chaperone required to export cobalamin (vitamin B12) from the lysosome to the cytosol, allowing its conversion to cofactors (PubMed: 19136951). Targets ABCD4 transporter from the endoplasmic reticulum to the lysosome (PubMed: 27456980). Then forms a complex with lysosomal ABCD4 and cytoplasmic MMACHC to transport cobalamin across the lysosomal membrane (PubMed: 25535791). Acts as an adapter protein

which plays an important role in mediating and regulating the internalization of the insulin receptor (INSR) (By similarity). Involved in clathrin-mediated endocytosis of INSR via its interaction with adapter protein complex 2 (By similarity). Essential for the initiation of gastrulation and early formation of mesoderm structures during embryogenesis (By similarity).

Cellular Location

Endoplasmic reticulum membrane. Lysosome membrane; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q8K0B2}; Multi-pass membrane protein. Cytoplasmic vesicle, clathrin-coated vesicle {ECO:0000250|UniProtKB:Q8K0B2}

Tissue Location

Isoform 3 is expressed in liver.

Background

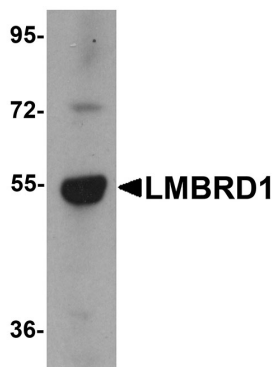
LMBRD1 Antibody: LMBRD1, also known as NESI (nuclear export signal-interacting protein, is a lysosomal membrane protein that is thought be involved in the transport and metabolism of cobalamin. LMBRD1 was initially identified as interacting with the large form of the hepatitis delta antigen and may be required for the nucleocytoplasmic shuttling of the hepatitis delta virus. Mutations in this gene are associated with the vitamin B12 metabolism disorder termed, homocystinuria-megaloblastic anemia complementation type F (cb1F).

References

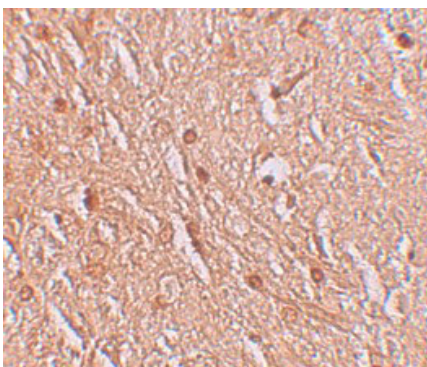
Gailus S, Hohne W, Gasnier B, et al. Insights into lysosomal cobalamin trafficking: lessons learned from cb1F disease. *J. Mol. Med.*2010; 88:459-66.

Wang Y-S, Chang SC, Huang C, et al. Novel nuclear export signal-interacting protein, NESI, critical for the assembly of hepatitis delta virus. *J. Virol.*2005; 79:8113-20.

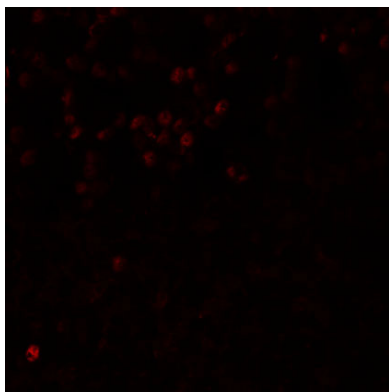
Images



Western blot analysis of LMBRD1 in human brain tissue lysate with LMBRD1 antibody at 1 µg/mL.



Immunohistochemistry of LMBRD1 in human brain tissue with LMBRD1 antibody at 2.5 µg/mL.



Immunofluorescence of LMBRD1 in human brain tissue with LMBRD1 antibody at 20 µg/mL.

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