10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DNM1L Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP21246b

Specification

DNM1L Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	O00429
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**81877**

DNM1L Antibody (C-term) - Additional Information

Gene ID 10059

Other Names
Dynamin-1-like protein, Dnm1p/Vps1p-like protein, DVLP, Dynamin family member proline-rich carboxyl-terminal domain less, Dymple, Dynamin-like protein, Dynamin-like protein 4, Dynamin-like protein IV, HdynIV, Dynamin-related protein 1, DNM1L, DLP1, DRP1

Target/Specificity
This DNM1L antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 513-547 amino acids from the C-terminal region of human DNM1L.

Dilution
WB~~1:8000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
DNM1L Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

DNM1L Antibody (C-term) - Protein Information

Name DNM1L (HGNC:2973)

Synonyms DLP1, DRP1

Function Functions in mitochondrial and peroxisomal division (PubMed:11514614, PubMed:12499366, PubMed:17301055, PubMed:17460227, PubMed:17553808, PubMed:18695047, PubMed:18838687, PubMed:19342591, PubMed:19411255, PubMed:19638400, PubMed:23283981, PubMed:23530241, PubMed:23921378, PubMed:26992161, PubMed:27145208, PubMed:27145933, PubMed:27301544, PubMed:27328748, PubMed:29478834, PubMed:32439975, PubMed:32484300, PubMed:9570752, PubMed:9786947). Mediates membrane fission through oligomerization into membrane-associated tubular structures that wrap around the scission site to constrict and sever the mitochondrial membrane through a GTP hydrolysis-dependent mechanism (PubMed:23530241, PubMed:23584531, PubMed:33850055). The specific recruitment at scission sites is mediated by membrane receptors like MFF, MIEF1 and MIEF2 for mitochondrial membranes (PubMed:23283981, PubMed:23921378, PubMed:29899447). While the recruitment by the membrane receptors is GTP-dependent, the following hydrolysis of GTP induces the dissociation from the receptors and allows DNM1L filaments to curl into closed rings that are probably sufficient to sever a double membrane (PubMed:29899447). Acts downstream of PINK1 to promote mitochondrial fission in a PRKN-dependent manner (PubMed:32484300). Plays an important role in mitochondrial fission during mitosis (PubMed:19411255, PubMed:26992161, PubMed:27301544, PubMed:27328748). Through its function in mitochondrial division, ensures the survival of at least some types of postmitotic neurons, including Purkinje cells, by suppressing oxidative damage (By similarity). Required for normal brain development, including that of cerebellum (PubMed:17460227, PubMed:26992161, PubMed:27145208, PubMed:27301544, PubMed:27328748). Facilitates developmentally regulated apoptosis during neural tube formation (By similarity). Required for a normal rate of cytochrome c release and caspase activation during apoptosis; this requirement may depend upon the cell type and the physiological apoptotic cues (By similarity). Required for formation of endocytic vesicles (PubMed:20688057, PubMed:23792689, PubMed:9570752). Proposed to regulate synaptic vesicle membrane dynamics through association with BCL2L1 isoform Bcl-X(L) which stimulates its GTPase activity in synaptic vesicles; the function may require its recruitment by MFF to clathrin-containing vesicles (PubMed:17015472, PubMed:23792689). Required for programmed necrosis execution (PubMed:22265414). Rhythmic control of its activity following phosphorylation at Ser-637 is essential for the circadian control of mitochondrial ATP production (PubMed:29478834).

Cellular Location
Cytoplasm, cytosol. Golgi apparatus. Endomembrane system; Peripheral membrane protein. Mitochondrion outer membrane; Peripheral membrane protein. Peroxisome. Membrane, clathrin-coated pit {ECO:0000250|UniProtKB:O35303}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:O35303}. Note=Mainly cytosolic. Recruited by RALA and RALBP1 to mitochondrion during mitosis (PubMed:21822277). Translocated to the mitochondrial membrane through O-GlcNAcylation and interaction with FIS1. Colocalized with MARCHF5 at mitochondrial membrane (PubMed:17606867). Localizes to mitochondria at sites of division (PubMed:15208300). Localizes to mitochondria following necrosis induction. Recruited to the mitochondrial outer membrane by interaction with MIEF1. Mitochondrial recruitment is inhibited by C11orf65/MFI (By similarity). Associated with peroxisomal membranes, partly recruited there by PEX11B. May also be associated with endoplasmic reticulum tubules and cytoplasmic vesicles and found to be perinuclear (PubMed:9422767, PubMed:9570752). In some cell types, localizes to the Golgi complex (By similarity). Binds to phospholipid membranes (By similarity). {ECO:0000250, ECO:0000250|UniProtKB:Q8K1M6, ECO:0000269|PubMed:15208300, ECO:0000269|PubMed:17606867, ECO:0000269|PubMed:21822277, ECO:0000269|PubMed:9422767, ECO:0000269|PubMed:9570752}

Tissue Location
Ubiquitously expressed with highest levels found in skeletal muscles, heart, kidney and brain. Isoform 1 is brain-specific Isoform 2 and isoform 3 are predominantly expressed in testis and skeletal muscles respectively. Isoform 4 is weakly expressed in brain, heart and kidney. Isoform 5 is dominantly expressed in liver, heart and kidney. Isoform 6 is expressed in neurons

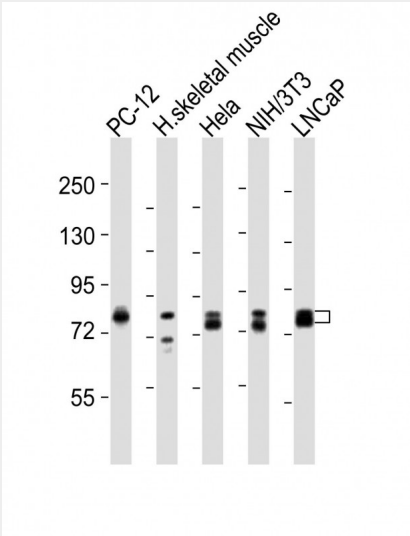
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DNM1L Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DNM1L Antibody (C-term) - Images



All lanes : Anti-DNM1L Antibody (C-term) at 1:8000 dilution Lane 1: PC-12 whole cell lysates Lane 2: human skeletal muscle lysates Lane 3: Hela whole cell lysates Lane 4: NIH/3T3 whole cell lysates Lane 5: LNCaP whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 82 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

DNM1L Antibody (C-term) - Background

Functions in mitochondrial and peroxisomal division. Mediates membrane fission through oligomerization into membrane- associated tubular structures that wrap around the scission site to constrict and sever the mitochondrial membrane through a GTP hydrolysis-dependent mechanism. Through its function in mitochondrial division, ensures the survival of at least some types of postmitotic neurons, including Purkinje cells, by suppressing oxidative damage. Required for normal brain development, including that of cerebellum. Facilitates developmentally regulated apoptosis during neural tube formation. Required for a normal rate of cytochrome c release and caspase activation during apoptosis; this requirement may depend upon the cell type and the physiological apoptotic cues. Also required for mitochondrial fission during mitosis. Required for formation of endocytic vesicles. Proposed to regulate synaptic vesicle membrane dynamics through association with BCL2L1 isoform Bcl-X(L) which stimulates its GTPase activity in synaptic vesicles; the function may require its recruitment by MFF to clathrin-containing vesicles. Required for programmed necrosis execution.

DNM1L Antibody (C-term) - References

Shin H.-W.,et al.J. Biochem. 122:525-530(1997).
Hong Y.-R.,et al.Biochem. Biophys. Res. Commun. 249:697-703(1998).
Imoto M.,et al.J. Cell Sci. 111:1341-1349(1998).
Chen C.-H.,et al.DNA Cell Biol. 19:189-194(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).