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Rabbit Anti-phospho-DRP1 (Ser616) antibody

SL12702R

Product Name:	phospho-DRP1 (Ser616)
Chinese Name:	磷酸化动力相关蛋白1抗体
Alias:	DRP1 (phospho S616); p-DRP1 (phospho S616); P-DRP1 (Ser616); DLP1; dnm1l; DNM1L_HUMAN; Dnm1p/Vps1p-like protein; DVLP; Dymple; Dynamin 1 like; Dynamin family member proline-rich carboxyl-terminal domain less; Dynamin like protein; Dynamin related protein 1; Dynamin-1-like protein; Dynamin-like protein 4; Dynamin-like protein; Dynamin-like protein IV; Dynamin-related protein 1; DYNIV 11; FLJ41912; HdynIV; VPS1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	82kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human DRP1 around the phosphorylation site of Ser616:PA(p-S)PQ
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Product Detail:	This gene encodes a member of the dynamin superfamily of GTPases. The encoded protein mediates mitochondrial and peroxisomal division, and is involved in developmentally regulated apoptosis and programmed necrosis. Dysfunction of this gene is implicated in several neurological disorders, including Alzheimer's disease. Mutations in this gene are associated with the autosomal dominant disorder, encephalopathy, lethal, due to defective mitochondrial and peroxisomal fission (EMPF). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jun 2013] **Function:** Functions in mitochondrial and peroxisomal division. Mediates membrane fission through oligomerization into ring-like structures which wrap around the scission site to constict and sever the mitochondrial membrane through a GTP hydrolysis-dependent mechanism. Required for normal brain development. Facilitates developmentally-regulated apoptosis during neural tube development. Required for a normal rate of cytochrome c release and caspase activation during apoptosis. Also required for mitochondrial fission during mitosis. May be involved in vesicle transport. Isoform 1 and isoform 4 inhibit peroxisomal division when overexpressed. **Subcellular Location:** Cytoplasm > cytosol. Golgi apparatus. Endomembrane system. Mainly cytosolic. Translocated to the mitochondrial membrane through interaction with FIS1. Colocalized with MARCH5 at mitochondrial membrane. Localizes to mitochondria at sites of division. 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. In some cell types, localizes to the Golgi complex. **Tissue Specificity:** 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. **Post-translational modifications:** Phosphorylation/dephosphorylation events on two sites near the GED domain regulate mitochondrial fission. Phosphorylation on Ser-637 inhibits mitochondrial fissin probably through preventing intramolecular interaction. Dephosphorylated on this site by PPP3CA which promotes mitochondrial fission. Phosphorylation on Ser-616 also promotes mitochondrial fission. Sumoylated on various lysine residues within the B domain. Desumoylated by SENP5 during G2/M transition of mitosis. Appears to be linked to its catalytic activity. S-nitrosylation increases DNM1L dimerization, mitochondrial fission and causes neuronal damage. Ubiquitination by MARCH5 affects mitochondrial morphology.

DISEASE:
Note=May be associated with Alzheimer disease through beta-amyloid-induced increased S-nitrosylation of DNM1L, which triggers, directly or indirectly, excessive mitochondrial fission, synaptic loss and neuronal damage.

Similarity:
Belongs to the dynamin family.
Contains 1 GED domain.

SWISS:
O00429

Gene ID:
10059

Database links:

Entrez Gene: 10059 Human

Entrez Gene: 74006 Mouse

Entrez Gene: 114114 Rat

Omim: 603850 Human

SwissProt: O00429 Human

SwissProt: Q8K1M6 Mouse

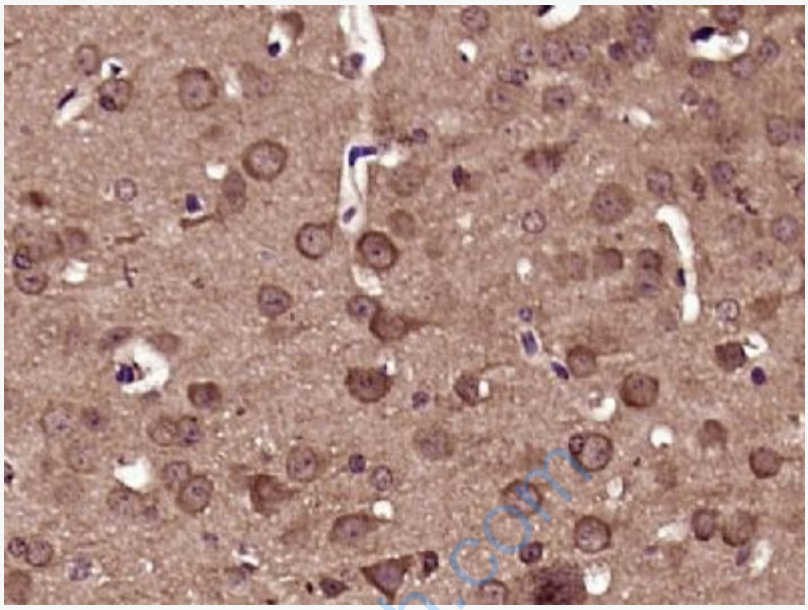
SwissProt: O35303 Rat

Unigene: 556296 Human

Unigene: 218820 Mouse

Unigene: 216851 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:	 Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-DRP1 (Ser616)) Polyclonal Antibody, Unconjugated (SL12702R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.