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Product datasheet for TA327386S

DRP1 (DNM1L) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, WB
Recommended Dilution:	WB 1:500 - 1:2000;IF 1:50- 1:200
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein of human DRP1
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	dynamin 1-like
Database Link:	NP_005681 Entrez Gene 74006 MouseEntrez Gene 114114 RatEntrez Gene 10059 Human O00429

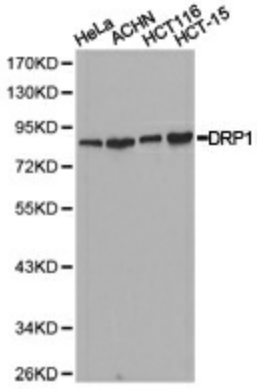
View online »

Background: Dynamin-related protein 1 (DRP1) is a member of the dynamin superfamily of GTPases. Members of this family have diverse cellular functions including vesicle scission, organelle fission, viral resistance, and intracellular trafficking (reviewed in 1). DRP1 affects mitochondrial morphology and is important in mitochondrial and peroxisomal fission in mammalian cells. The yeast ortholog of DRP1 clusters into a spiral-shaped structure on the mitochondrial membrane at the site of fission, and this structure is likely conserved in mammalian cells. The division of the mitochondria, which is required for apoptosis, as well as normal cell growth and development is controlled, in part, by the phosphorylation of DRP1 at Ser616 by Cdk1/cyclin B and at Ser637 by protein kinase A (PKA). When phosphorylated at Ser616, DRP1 stimulates mitochondrial fission during mitosis. Conversely, fission is inhibited when DRP1 is phosphorylated at Ser637. Dephosphorylation at Ser637 by calcineurin reverses this inhibition. In addition to phosphorylation, sumoylation of DRP1 is also an enhancer of mitochondrial fission. Balancing fission and fusion events is essential for proper mitochondrial function. Research studies have demonstrated mitochondrial defects in a variety of neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, and Huntington's disease.

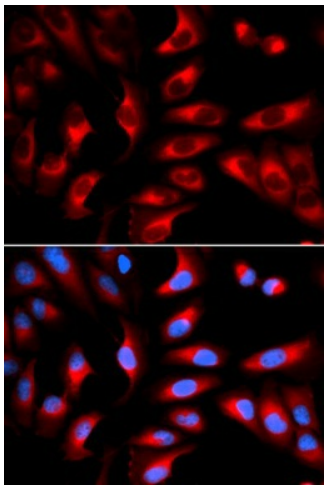
Synonyms: DLP1; DRP1; DVLP; DYMPLE; EMPF; EMPF1; HDYNIV

Protein Pathways: Endocytosis, Fc gamma R-mediated phagocytosis

Product images:



Western blot analysis of extracts of various cell lines, using DRP1 antibody.



Immunofluorescence analysis of U2OS cell using DNM1L antibody. Blue: DAPI for nuclear staining.