abcam

Product datasheet

Anti-DRP1 antibody [3B5] ab56788

★★★★★ 21 Abreviews 182 References 3 图像

概述

产品名称	Anti-DRP1抗体[3B5]
描述	**小鼠单克隆抗体**[3B5] to DRP1
宿主	Mouse
经测试应用	**适用于:** IHC-P, IP, Flow Cyt
种属反应性	**与反应:** Human
免疫原	Recombinant full length protein corresponding to Human DRP1 aa 1-710.
常规说明	This product was changed from ascites to tissue culture supernatant on 15 May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	pH: 7.40 Constituent: PBS
纯度	Tissue culture supernatant
纯化说明	Purified from TCS.
克隆	单克隆
克隆编号	3B5
同种型	IgG2b
轻链类型	kappa

应用

The Abpromise guarantee Abpromise™承诺保证使用ab56788于以下的经测试应用

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P	★★★★☆ (3)	Use at an assay dependent concentration.
IP	★★★★★ (2)	Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. **ab170192** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

靶标

功能 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.

组织特异性 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.

疾病相关 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.

序列相似性 Belongs to the dynamin family.
Contains 1 GED domain.

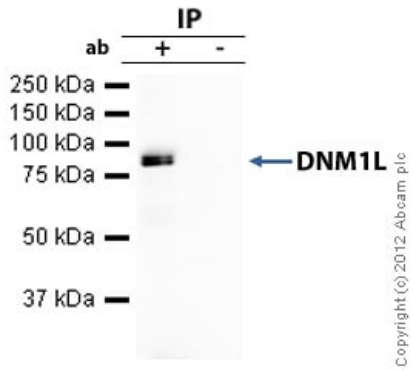
结构域 The GED domain folds back to interact, in cis, with the GTP-binding domain and middle domain, and interacts, in trans, with the GED domains of other DNM1L molecules, and is thus critical for activating GTPase activity and for DNM1L dimerization.

翻译后修饰 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.

细胞定位 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.

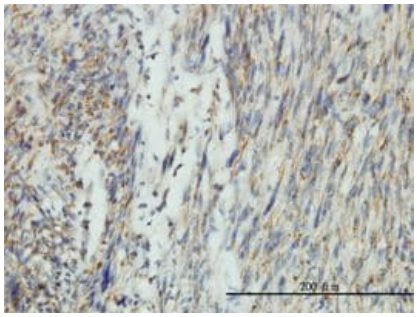
图片



Immunoprecipitation - Anti-DRP1 antibody [3B5] (ab56788)

DNM1L was immunoprecipitated using 0.5mg Hek293 whole cell extract, 10µg of Mouse monoclonal to DNM1L and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Hek293 whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70^{o}C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab56788.
Secondary: Goat polyclonal to mouse IgG light chain specific (HRP) at 1/5000 dilution.
Band: 90kDa; DNM1L.

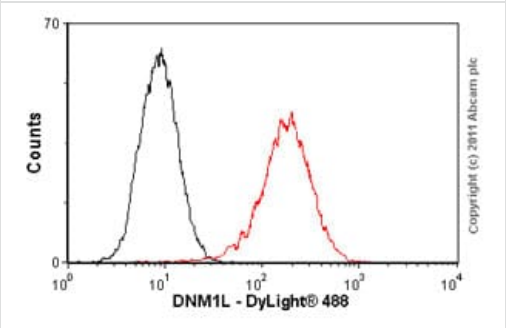
This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DRP1 antibody [3B5] (ab56788)

DNM1L antibody (ab56788) used in immunohistochemistry at 1ug/ml on formalin fixed and paraffin embedded human leiomyosarcoma tissue.

This image was generated using the ascites version of the product.



Flow Cytometry - Anti-DRP1 antibody [3B5] (ab56788)

Overlay histogram showing HEK293 cells stained with ab56788 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab56788, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (**ab91366**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 100% methanol (5 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

This image was generated using the ascites version of the product.