abcam

Product datasheet

Anti-DRP1 antibody [EPR19274] ab184247

リコンビナント RabMAb

★★★★★ 4 Abreviews 127 References 画像数 11

製品の概要

製品名	Anti-DRP1 antibody [EPR19274]
製品の詳細	Rabbit monoclonal [EPR19274] to DRP1
由来種	Rabbit
アプリケーション	**適用あり:** Flow Cyt (Intra), WB, ICC/IF, IP, IHC-P
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: Human fetal kidney, rat brain, rat heart and mouse brain lysates; A549, U-2 OS, HeLa, Jurkat, HEK-293, HCT 116, PC-12 and NIH/3T3 whole cell lysates. IHC-P: Mouse cerebrum and rat cerebellum tissues. ICC/IF: HeLa and NIH/3T3 cells. Flow Cyt (intra): NIH/3T3 cells. IP: HeLa whole cell lysate.
特記事項	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.05% BSA, 40% Glycerol
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR19274

アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab184247の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
Flow Cyt (Intra)		1/70.
WB	★★★★★ (4)	1/1000. Detects a band of approximately 83 kDa (predicted molecular weight: 83 kDa).
ICC/IF		1/250.
IP		1/30.
IHC-P		1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. IHC is recommended for rat and mouse only.

ターゲット情報

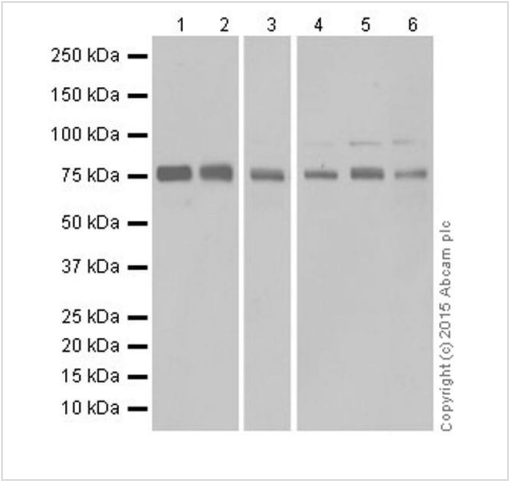
機能	Functions in mitochondrial and peroxisomal division. Mediates membrane fission through oligomerization into ring-like structures which wrap around the scission site to constict and sever the mitochondrial membrane through a GTP hydrolysis-dependent mechanism. Required for normal brain development. 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.
組織特異性	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.
関連疾患	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.
配列類似性	Belongs to the dynamin family. Contains 1 GED domain.
ドメイン	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.
翻訳後修飾	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.

細胞内局在

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.

画像



Western blot - Anti-DRP1 antibody [EPR19274] (ab184247)

All lanes : Anti-DRP1 antibody [EPR19274] (ab184247) at 1/1000 dilution

Lane 1 : A549 (Human lung carcinoma cell line) whole cell lysate
Lane 2 : U-2 OS (Human bone osteosarcoma epithelial cell line) whole cell lysate
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 5 : HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 6 : HCT 116 (Human colorectal carcinoma cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

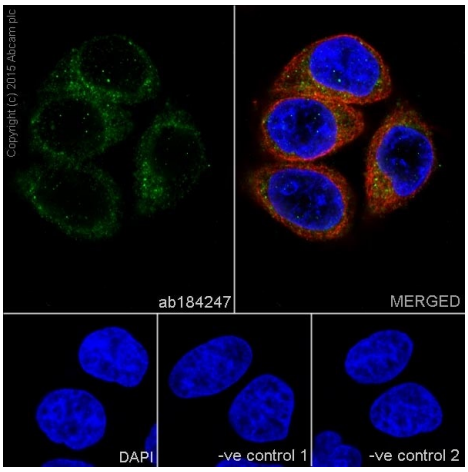
Predicted band size: 83 kDa
Observed band size: 83 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1 and 2: 3 minutes; Lane 3: 30 seconds; Lane 4,5 and 6: 8 seconds.

DRP1 can be SUMOylated, as described in the literature (PMID:

19638400).

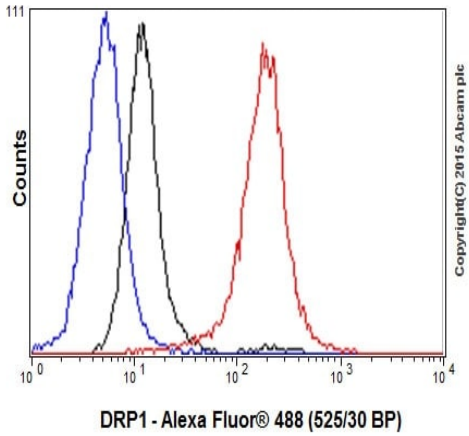


Immunocytochemistry/ Immunofluorescence - Anti-DRP1 antibody [EPR19274] (ab184247)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling DRP1 with ab184247 at 1/250 dilution, followed by Goat anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasm staining on HeLa cell line. The nuclear counter stain is DAPI (blue).

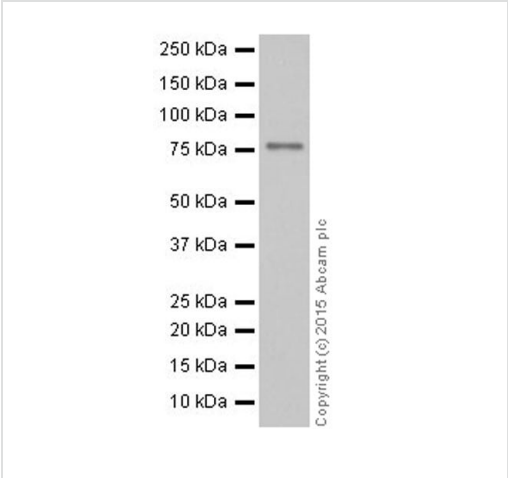
Tubulin is detected with Anti-alpha Tubulin antibody [EPR19274] - Loading Control (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) preadsorbed (**ab150120**) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab184247 at 1/250 dilution followed by **ab150120** at 1/1000 dilution.
-ve control 2: **ab7291** at 1/1000 dilution followed by **ab150077** at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-DRP1 antibody [EPR19274] (ab184247)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling DRP1 with ab184247 at 1/70 dilution (red) compared with a Rabbit IgG,monoclonal -Isotype Control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



Western blot - Anti-DRP1 antibody [EPR19274] (ab184247)

Anti-DRP1 antibody [EPR19274] (ab184247) at 1/1000 dilution + Human fetal kidney lysate at 10 µg

Secondary

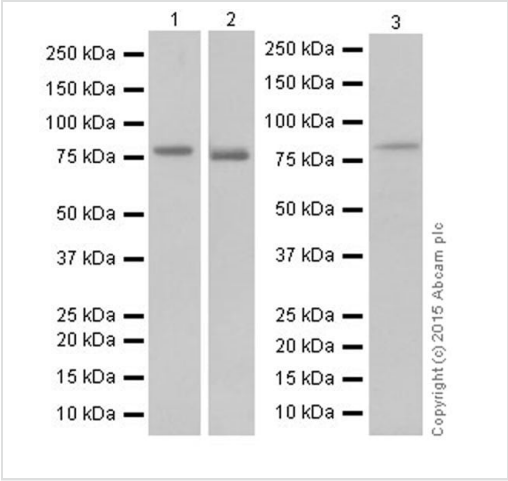
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/100000 dilution

Predicted band size: 83 kDa

Observed band size: 83 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - Anti-DRP1 antibody [EPR19274] (ab184247)

All lanes : Anti-DRP1 antibody [EPR19274] (ab184247) at 1/1000 dilution

Lane 1 : Rat brain lysate

Lane 2 : Rat heart lysate

Lane 3 : Mouse brain lysate

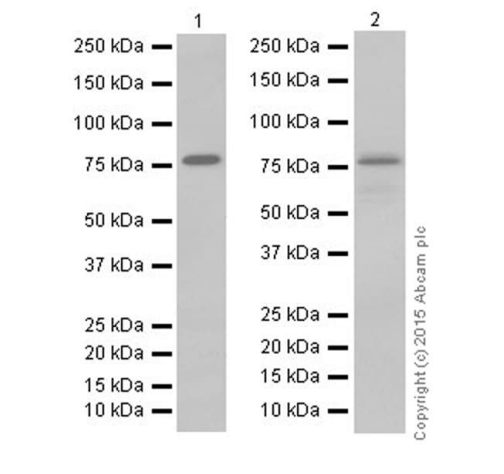
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 83 kDa

Observed band size: 83 kDa



Western blot - Anti-DRP1 antibody [EPR19274] (ab184247)

Blocking/Dilution buffer: 5% NFDM/TBST.

Lane 1: 2 seconds; Lane 2: 8 seconds; Lane 3: 3 seconds.

All lanes : Anti-DRP1 antibody [EPR19274] (ab184247) at 1/1000 dilution

Lane 1 : PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate
Lane 2 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

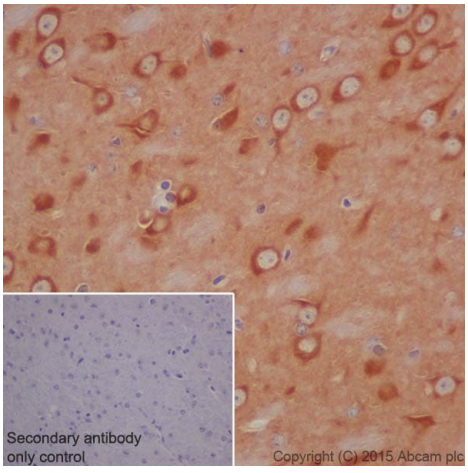
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 83 kDa
Observed band size: 83 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

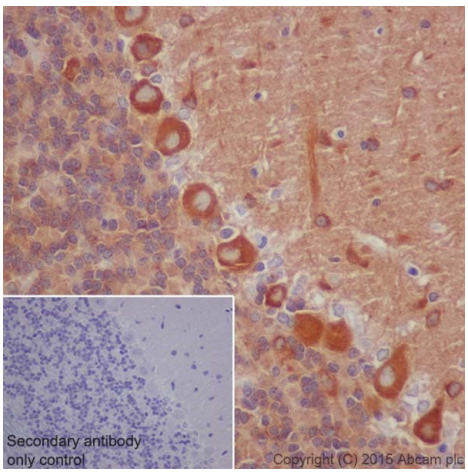


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DRP1 antibody [EPR19274] (ab184247)

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling DRP1 with ab184247 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on mouse cerebrum is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

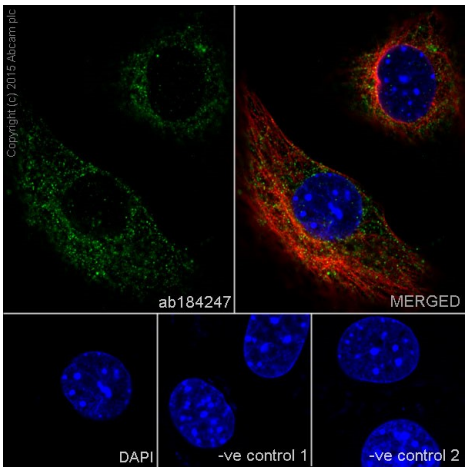


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DRP1 antibody [EPR19274] (ab184247)

Immunohistochemical analysis of paraffin-embedded Rat cerebellum tissue labeling DRP1 with ab184247 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasm staining on rat cerebellum is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

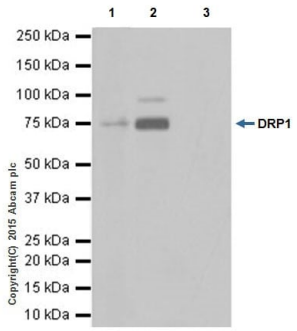


Immunocytochemistry/ Immunofluorescence - Anti-DRP1 antibody [EPR19274] (ab184247)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling DRP1 with ab184247 at 1/250 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasm staining on NIH/3T3 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [EPR19274] - Loading Control (**ab7291**) at 1/1000 dilution and Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) preadsorbed (**ab150120**) at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab184247 at 1/250 dilution followed by **ab150120** at 1/1000 dilution.
-ve control 2: **ab7291** at 1/1000 dilution followed by **ab150077** at 1/1000 dilution.



Immunoprecipitation - Anti-DRP1 antibody [EPR19274] (ab184247)

DRP1 was immunoprecipitated from 1mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab184247 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184247 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: HeLa whole cell lysate 10µg (Input).

Lane 2: ab184247 IP in HeLa whole cell lysate.

Lane 3: Rabbit IgG,monoclonal [EPR19274]-Isotype Control (**ab172730**) instead of ab184247 in HeLa whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5 seconds.

Note: DRP1 can be SUMOylated, as described in the literature (PMID: 19638400).

Anti-DRP1 antibody [EPR19274] (ab184247)

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