abcam

Product datasheet

Anti-AIF antibody - Mitochondrial Marker ab1998

★★★★★ 3 Abreviews 37 References 6 图像

概述

产品名称	Anti-AIF抗体- Mitochondrial Marker
描述	兔多克隆抗体to AIF - Mitochondrial Marker
宿主	Rabbit
经测试应用	**适用于:** WB, IHC-P, ICC/IF
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide corresponding to Human AIF aa 500-600. Database link: **O95831-1**
阳性对照	WB: Human Caco-2, Daudi, HeLa, HepG2, MCF7, NIH3T3, YB2/0 and K562 cell lysate. Rat and mouse heart lysate. IHC-P: Human retina. ICC/IF: Human U2OS and HeLa cells.
常规说明	Apoptosis Inducing Factor 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. Store at +4°C short term (1-2 weeks). Store at -20°C. Avoid freeze / thaw cycle. Stable for 12 months at -20°C.
存储溶液	pH: 7.2 Preservative: 0.02% Sodium azide
纯度	Affinity purified
纯化说明	AIF Antibody is affinity chromatography purified via peptide column.
克隆	多克隆
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab1998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
WB	★★★★★ (2)	Use a concentration of 0.25 - 1 µg/ml. Detects a band of approximately 67 kDa (predicted molecular weight: 67 kDa). Can be blocked with **AIF (internal) peptide (human)**.
IHC-P	★★★★★ (1)	Use at an assay dependent concentration.
ICC/IF		Use a concentration of 1 µg/ml.

靶标

功能 Probable oxidoreductase that has a dual role in controlling cellular life and death; during apoptosis, it is translocated from the mitochondria to the nucleus to function as a proapoptotic factor in a caspase-independent pathway, while in normal mitochondria, it functions as an antiapoptotic factor via its oxidoreductase activity. The soluble form (AIFsol) found in the nucleus induces 'parthanatos' i.e., caspase-independent fragmentation of chromosomal DNA. Interacts with EIF3G,and thereby inhibits the EIF3 machinery and protein synthesis, and activates casapse-7 to amplify apoptosis. Plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells. Binds to DNA in a sequence-independent manner.

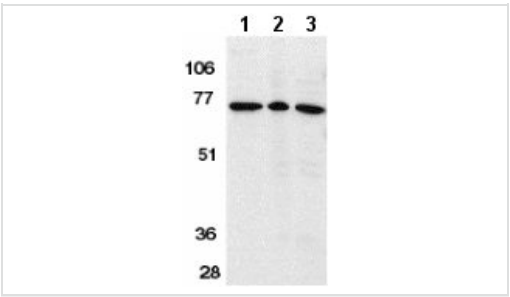
疾病相关 Defects in AIFM1 are the cause of combined oxidative phosphorylation deficiency type 6 (COXPD6) [MIM:300816]. It is a mitochondrial disease resulting in a neurodegenerative disorder characterized by psychomotor delay, hypotonia, areflexia, muscle weakness and wasting.

序列相似性 Belongs to the FAD-dependent oxidoreductase family.

翻译后修饰 Under normal conditions, a 54-residue N-terminal segment is first proteolytically removed during or just after translocation into the mitochondrial intermembrane space (IMS) by the mitochondrial processing peptidase (MPP) to form the inner-membrane-anchored mature form (AIFmit). During apoptosis, it is further proteolytically processed at amino-acid position 101 leading to the generation of the mature form, which is confined to the mitochondrial IMS in a soluble form (AIFsol). AIFsol is released to the cytoplasm in response to specific death signals, and translocated to the nucleus, where it induces nuclear apoptosis in a caspase-independent manner.

细胞定位 Mitochondrion intermembrane space. Mitochondrion inner membrane. Cytoplasm. Nucleus. Cytoplasm > perinuclear region. Proteolytic cleavage during or just after translocation into the mitochondrial intermembrane space (IMS) results in the formation of an inner-membrane-anchored mature form (AIFmit). During apoptosis, further proteolytic processing leads to a mature form, which is confined to the mitochondrial IMS in a soluble form (AIFsol). AIFsol is released to the cytoplasm in response to specific death signals, and translocated to the nucleus, where it induces nuclear apoptosis. Colocalizes with EIF3G in the nucleus and perinuclear region.

图片

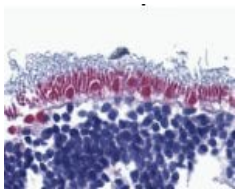


Western blot - Anti-AIF antibody - Mitochondrial Marker (ab1998)

All lanes : Anti-AIF antibody - Mitochondrial Marker (ab1998) at 1 µg/ml

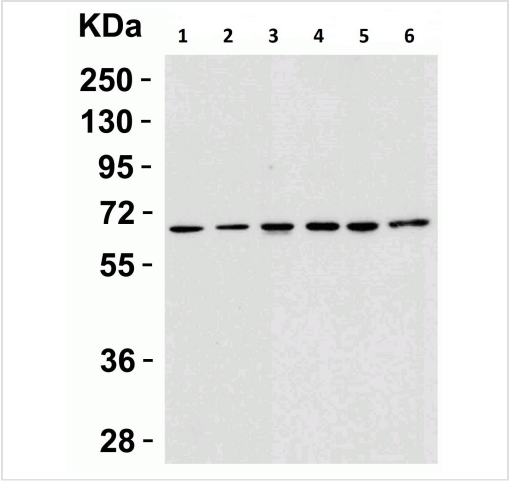
Lane 1 : K562 cell lysate
Lane 2 : Rat heart tissue lysate
Lane 3 : Mouse heart tissue lysate

Predicted band size: 67 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AIF antibody - Mitochondrial Marker (ab1998)

Immunohistochemistry of AIF in human retina with anti-AIF (IN) at 10 µg/ml.



Western blot - Anti-AIF antibody - Mitochondrial Marker (ab1998)

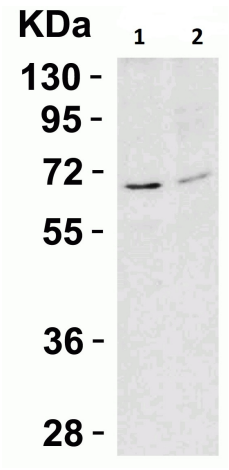
All lanes : Anti-AIF antibody - Mitochondrial Marker (ab1998) at 1 µg/ml

Lane 1 : Caco-2 cell lysate
Lane 2 : Daudi cell lysate
Lane 3 : HeLa cell lysate
Lane 4 : HepG2 cell lysate
Lane 5 : K562 cell lysate
Lane 6 : MCF7 cell lysate

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat anti-rabbit IgG HRP conjugate at 1/10000 dilution

Predicted band size: 67 kDa



Western blot - Anti-AIF antibody - Mitochondrial Marker (ab1998)

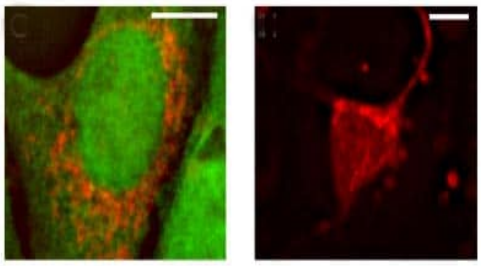
All lanes : Anti-AIF antibody - Mitochondrial Marker (ab1998) at 1 µg/ml

Lane 1 : NIH3T3 cell lysate
Lane 2 : YB2/0 cell lysate

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat anti-rabbit IgG HRP conjugate at 1/10000 dilution

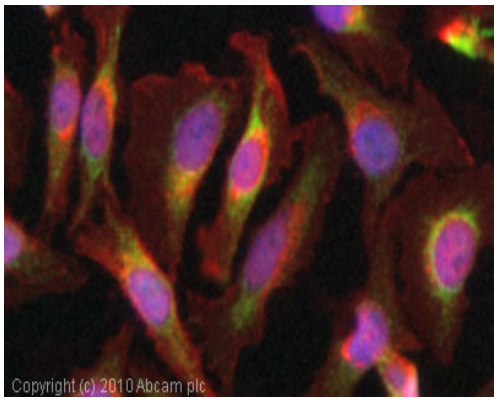
Predicted band size: 67 kDa



Immunocytochemistry/ Immunofluorescence - Anti-AIF antibody - Mitochondrial Marker (ab1998)

Image from Varecha M et al, J Biomed Sci. 2009 Jul 6;16:59, fig 2.

ab1998 staining AIF in human U2OS cells by Immunocytochemistry. Samples were fixed using 4% paraformaldehyde.Left image shows fixed cells labeled with ab1998 (red) and cyclophilin A (green). Right image shows U2OS cell 6 hours after induction of apoptosis by 200 nM staurosporine.Note translocated of AIF to the nucleus upon induction of apoptosis.



Immunocytochemistry/ Immunofluorescence - Anti-AIF antibody - Mitochondrial Marker (ab1998)

ICC image of ab1998 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab1998, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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