

Product datasheet

Anti-AIF antibody ab1999

3 Images

Overview

<b>Product name</b>	Anti-AIF antibody
<b>Description</b>	Rabbit polyclonal to AIF
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide, corresponding to amino acids 109-122 of Human AIF.
<b>Positive control</b>	K562 cell lysate
<b>General notes</b>	Apoptosis Inducing Factor.

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	PBS with 0.02% sodium azide
<b>Purity</b>	IgG fraction
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab1999** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		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 <a href="#">AIF peptide (ab7871)</a> .
ICC/IF		Use a concentration of 2 µg/ml.

## Target

### Function

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 caspase-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.

### Involvement in disease

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.

### Sequence similarities

Belongs to the FAD-dependent oxidoreductase family.

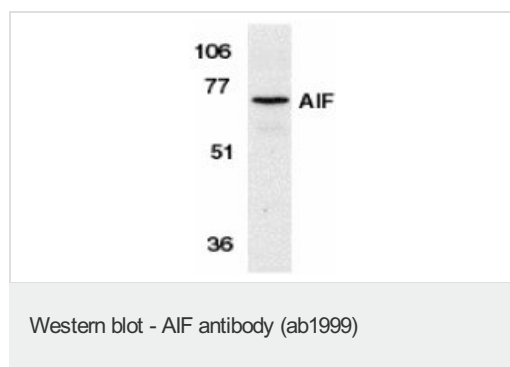
### Post-translational modifications

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.

### Cellular localization

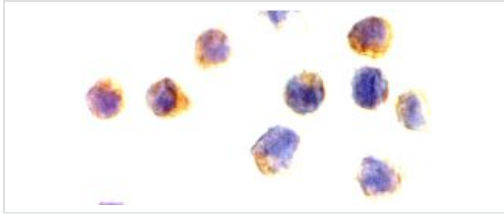
Mitochondrion intermembrane space. Mitochondrion inner membrane. Cytoplasm. Nucleus. Cytoplasm > perinuclear region. Proteolytic cleavage during or just after translocation into the mitochondrial intermembrane space (IMS) results in the formation of an inner-membrane-anchored mature form (AIFmit). During 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.

## Images



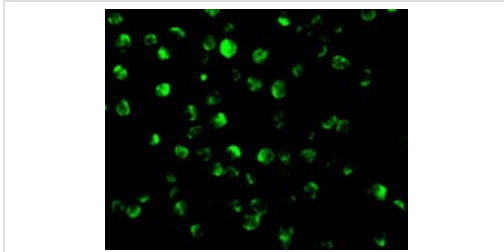
Anti-AIF antibody (ab1999) at 1 µg/ml + K562 cell lysate

**Predicted band size: 67 kDa**



Immunocytochemistry of AIF in Jurkat cells with AIF antibody at 2 µg/ml.

Immunohistochemistry - AIF antibody (ab1999)



Immunofluorescence of AIF in K562 cells using ab1999 at 20 µg/ml.

Immunocytochemistry/ Immunofluorescence-Anti-AIF antibody(ab1999)

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