

## ARG54380 anti-AIF antibody

Package: 50 µg  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes AIF
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Specificity	This antibody recognizes human, mouse, and rat AIF (67 kDa).
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	AIF
Species	Human
Immunogen	Peptide corresponding to aa 517-531 of human AIF. This sequence is identical to those of mouse and rat AIF.
Conjugation	Un-conjugated
Alternate Names	CMTX4; NAMSD; COWCK; Apoptosis-inducing factor 1, mitochondrial; CMT2D; EC 1.1.1.-; NADMR; PDGCD8; COXPD6; AIF; Programmed cell death protein 8

### Application Instructions

Application table	Application	Dilution
	ICC/IF	1 - 10 µg/ml
	IHC-P	1 - 10 µg/ml
	WB	0.25 - 1 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	K562, rat heart, mouse heart, human retina	

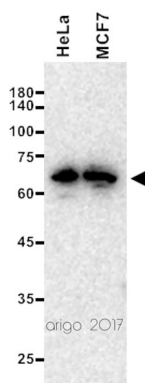
### Properties

Form	Liquid
Purification	Immunoaffinity chroma-tography
Buffer	PBS (pH 7.4) and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

## Bioinformation

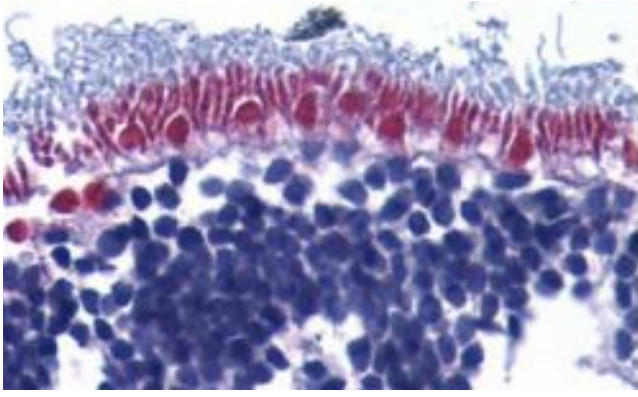
Gene Symbol	AIFM1
Gene Full Name	apoptosis-inducing factor, mitochondrion-associated, 1
Background	A novel protein that causes chromatin condensation and DNA fragmentation has been designated Apoptosis Inducing Factor (AIF). AIF localizes in mitochondria and translocates to the nucleus when apoptosis is induced. This event is followed by the release of cytochrome c and caspase-9 from mitochondria. AIF is highly conserved between human and mouse and widely expressed in different cell types and tissues.
Function	Functions both as NADH oxidoreductase and as regulator of apoptosis. In response to apoptotic stimuli, it is released from the mitochondrion intermembrane space into the cytosol and to the nucleus, where it functions as a proapoptotic factor in a caspase-independent pathway. In contrast, functions as an antiapoptotic factor in normal mitochondria via its NADH 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. [UniProt]
Highlight	Related products: <a href="#">AIF antibodies: Anti-Rabbit IgG secondary antibodies;</a> Related poster download: <a href="#">The Structure &amp; Functions of Mitochondria.pdf</a>
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Cell Death antibody; Gene Regulation antibody; Metabolism antibody
Calculated Mw	67 kDa
PTM	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. Ubiquitination by XIAP/BIRC4 does not lead to proteasomal degradation. Ubiquitination at Lys-255 by XIAP/BIRC4 blocks its ability to bind DNA and induce chromatin degradation, thereby inhibiting its ability to induce cell death.

## Images



ARG54380 anti-AIF antibody WB image

Western blot: 20 µg of HeLa and MCF7 cell lysates stained with ARG54380 anti-AIF antibody at 1:1000 dilution.



ARG54380 anti-AIF antibody IHC-P image

Immunohistochemistry: human retina stained with ARG54380 anti-AIF antibody at 10 µg/ml dilution.