ARG57162
anti-AIF (AIFM1) antibody [22E9]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [22E9] recognizes AIF (AIFM1)
Tested Reactivity	Hu
Tested Application	ICC/IF, WB
Host	Mouse
Clonality	Monoclonal
Clone	22E9
Isotype	IgG2a, kappa
Target Name	AIF (AIFM1)
Species	Human
Immunogen	Recombinant fragment around aa. 98-609 of Human AIF (AIFM1)
Conjugation	Un-conjugated
Alternate Names	CMTX4; NAMSD; COWCK; Apoptosis-inducing factor 1, mitochondrial; CMT2D; EC 1.1.1.-; NADMR; PDCD8; COXPD6; AIF; Programmed cell death protein 8

Application Instructions

Application table

Application	Dilution
ICC/IF	Assay-dependent
WB	Assay-dependent

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

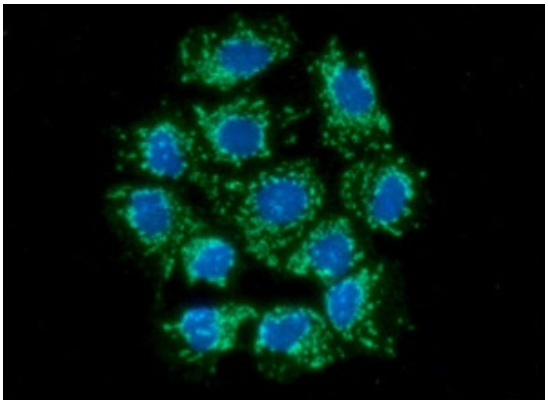
Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 10% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	10% Glycerol
Concentration	1 mg/ml
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. 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.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 9131 Human Swiss-port # O95831 Human
Gene Symbol	AIFM1
Gene Full Name	apoptosis-inducing factor, mitochondrion-associated, 1
Background	This gene encodes a flavoprotein essential for nuclear disassembly in apoptotic cells, and it is found in the mitochondrial intermembrane space in healthy cells. Induction of apoptosis results in the translocation of this protein to the nucleus where it affects chromosome condensation and fragmentation. In addition, this gene product induces mitochondria to release the apoptogenic proteins cytochrome c and caspase-9. Mutations in this gene cause combined oxidative phosphorylation deficiency 6 (COXPD6), a severe mitochondrial encephalomyopathy, as well as Cowchock syndrome, also known as X-linked recessive Charcot-Marie-Tooth disease-4 (CMTX-4), a disorder resulting in neuropathy, and axonal and motor-sensory defects with deafness and mental retardation. Alternative splicing results in multiple transcript variants. A related pseudogene has been identified on chromosome 10. [provided by RefSeq, Aug 2015]
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 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. [UniProt]
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.

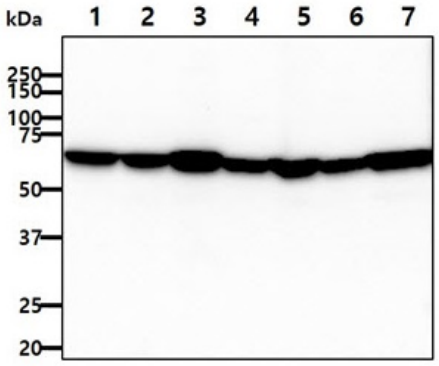
Images



ARG57162 anti-AIF (AIFM1) antibody [22E9] ICC/IF image

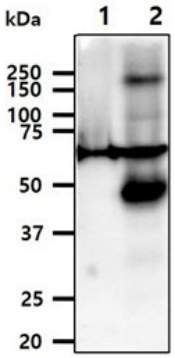
Immunofluorescence: Hep3B cells line stained with ARG57162 anti-AIF (AIFM1) antibody [22E9] at 1:100 (Green).

DAPI (Blue) for nucleus staining.



ARG57162 anti-AIF (AIFM1) antibody [22E9] WB image

Western blot: 40 µg of 1) Jurkat, 2) HeLa, 3) Hep3B, 4) Raji, 5) K562, 6) MCF7, and 7) CTLL2 cell lysates stained with ARG57162 anti-AIF (AIFM1) antibody [22E9] at 1:1000.



ARG57162 anti-AIF (AIFM1) antibody [22E9] WB image

Western blot: 40 µg of 1) Mouse heart, and 2) Mouse liver tissue lysates stained with ARG57162 anti-AIF (AIFM1) antibody [22E9] at 1:1000.