

AIFM1 / AIF / PDCD8 Antibody (aa593-606)
Rabbit Polyclonal Antibody
Catalog # ALS12954**Specification**

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Product Information

| | |
|-------------------|---|
| Application | ICC, WB, IHC |
| Primary Accession | O95831 |
| Reactivity | Human, Mouse, Rat, Rabbit, Hamster, Monkey, Pig, Horse, Bovine, Dog |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 67kDa KDa |

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Additional Information**Gene ID** 9131**Other Names**

Apoptosis-inducing factor 1, mitochondrial, 1.1.1.-, Programmed cell death protein 8, AIFM1, AIF, PDCD8

Target/Specificity

peptide (KDGEQHEDLNEVAK) corresponding to amino acids 593 to 606 of human AIF. This sequence is identical to those of mouse and rat AIF.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

AIFM1 / AIF / PDCD8 Antibody (aa593-606) is for research use only and not for use in diagnostic or therapeutic procedures.

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Protein Information**Name** AIFM1 ([HGNC:8768](#))**Synonyms** AIF, PDCD8**Function**

Functions both as NADH oxidoreductase and as regulator of apoptosis (PubMed:17094969, PubMed:20362274, PubMed:23217327, PubMed:33168626). 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 (PubMed:20362274).

Release into the cytoplasm is mediated upon binding to poly-ADP-ribose chains (By similarity). The soluble form (AIFsol) found in the nucleus induces 'parthanatos' i.e. caspase-independent fragmentation of chromosomal DNA (PubMed:20362274). Binds to DNA in a sequence-independent manner (PubMed:27178839). Interacts with EIF3G, and thereby inhibits the EIF3 machinery and protein synthesis, and activates caspase-7 to amplify apoptosis (PubMed:17094969). Plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells (PubMed:19418225). In contrast, participates in normal mitochondrial metabolism. Plays an important role in the regulation of respiratory chain biogenesis by interacting with CHCHD4 and controlling CHCHD4 mitochondrial import (PubMed:26004228).

Cellular Location

Mitochondrion intermembrane space. Mitochondrion inner membrane. Cytoplasm. Nucleus. Cytoplasm, perinuclear region. Note=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 (PubMed:15775970). Release into the cytoplasm is mediated upon binding to poly-ADP-ribose chains (By similarity) Translocation into the nucleus is promoted by interaction with (auto- poly-ADP-ribosylated) processed form of PARP1 (PubMed:33168626) Colocalizes with EIF3G in the nucleus and perinuclear region (PubMed:17094969). {ECO:0000250|UniProtKB:Q9Z0X1, ECO:0000269|PubMed:15775970, ECO:0000269|PubMed:17094969, ECO:0000269|PubMed:33168626} [Isoform 4]: Mitochondrion. Cytoplasm, cytosol. Note=In pro-apoptotic conditions, is released from mitochondria to cytosol in a calpain/cathepsin-dependent manner.

Tissue Location

Expressed in all tested tissues (PubMed:16644725). Detected in muscle and skin fibroblasts (at protein level) (PubMed:23217327). Expressed in osteoblasts (at protein level) (PubMed:28842795). [Isoform 4]: Expressed in all tested tissues except brain.

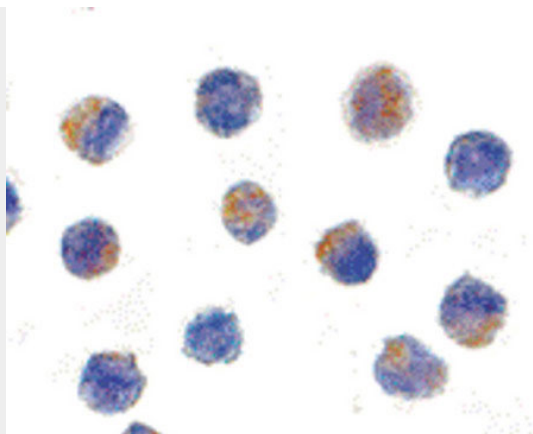
AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Protocols

Provided below are standard protocols that you may find useful for product applications.

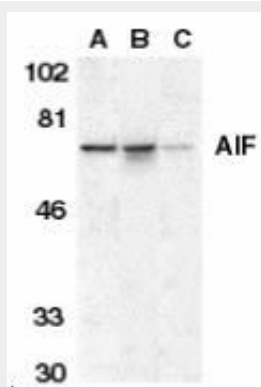
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Images

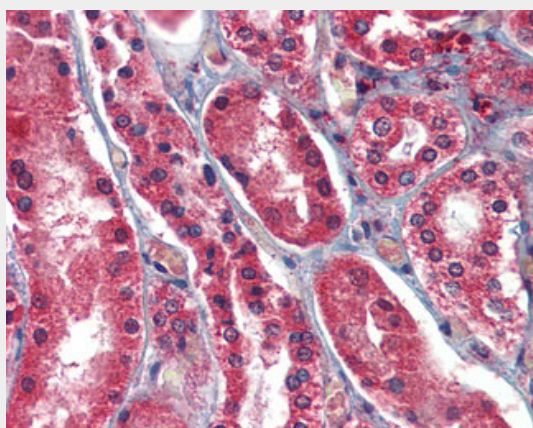




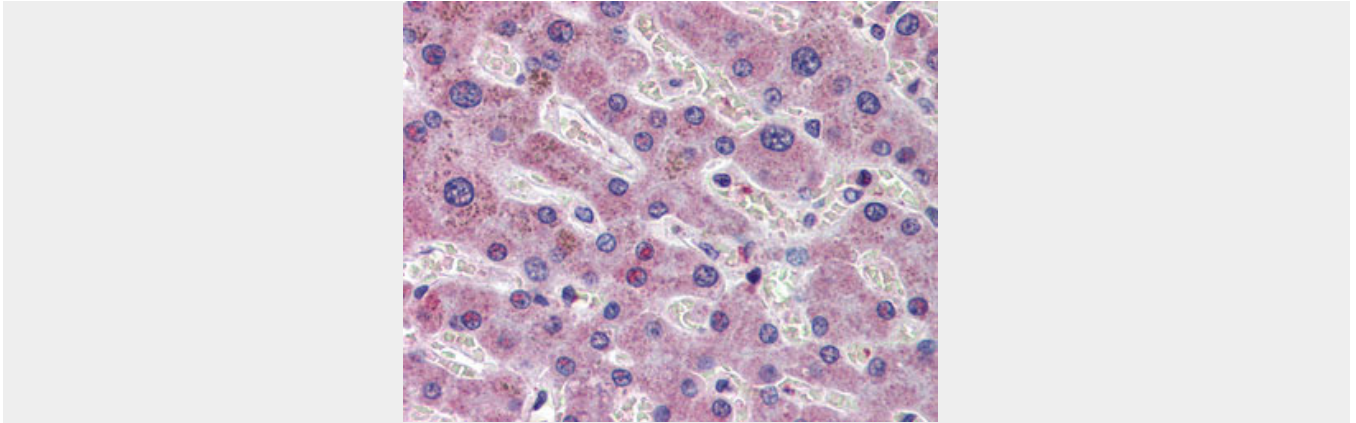
Immunocytochemistry of AIF in K562 cells with AIF antibody at 5 ug/ml.



Western blot of AIF in K562 cell lysate (A), mouse (B), and rat (C) liver tissue lysates with...



Anti-AIFM1 / AIF antibody IHC of human kidney.



Anti-AIFM1 / AIF antibody IHC of human liver.

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - Background

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.

AIFM1 / AIF / PDCD8 Antibody (aa593-606) - References

- Susin S.A., et al. Nature 397:441-446(1999).
- Delettre C., et al. J. Biol. Chem. 281:6413-6427(2006).
- Delettre C., et al. J. Biol. Chem. 281:18507-18518(2006).
- Rhodes S., et al. Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
- Ota T., et al. Nat. Genet. 36:40-45(2004).