

**KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1299****Specification****KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody - Product Information**

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application       | WB, FC, ICC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Primary Accession | <a href="#">O95831</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Reactivity        | Rat, Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clonality         | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Isotype           | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Calculated MW     | Predicted, 67 kDa; observed, 67 kDa kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Gene Name         | AIFM1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Aliases           | AIFM1; Apoptosis Inducing Factor Mitochondria Associated 1; AIF; CMTX4; DFNX5; PDCD8; Apoptosis-Inducing Factor, Mitochondrion-Associated, 1; Programmed Cell Death 8 (Apoptosis-Inducing Factor); Apoptosis-Inducing Factor 1, Mitochondrial; Auditory Neuropathy, X-Linked Recessive 1; AUNX1; NAMS; Neuropathy, Axonal, Motor-Sensory With Deafness And Mental Retardation (Cowchock Syndrome); Apoptosis Inducing Factor, Mitochondria Associated 1; Striatal Apoptosis-Inducing Factor; Testicular Secretory Protein Li 4; Programmed Cell Death Protein 8; EC 1.6.99.-; COXPD6; SEMDHL; CMT2D; COWCK; NADMR |
| Immunogen         | A synthesized peptide derived from human AIF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody - Additional Information**

|             |                                                                                                                                                                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID     | 9131                                                                                                                                                                                                                                                                                      |
| Other Names | Apoptosis-inducing factor 1, mitochondrial, 1.6.99.-, Programmed cell death protein 8, AIFM1 ( <a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=8768">http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=8768</a> target="_blank">HGNC:8768</a>), AIF, PDCD8 |

**KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody - Protein Information****Name** AIFM1 ([HGNC:8768](#))**Synonyms** AIF, PDCD8**Function**

Functions both as NADH oxidoreductase and as regulator of apoptosis (PubMed:&lt;a

href="http://www.uniprot.org/citations/17094969" target="\_blank">17094969</a>, PubMed:<a href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>, PubMed:<a href="http://www.uniprot.org/citations/23217327" target="\_blank">23217327</a>, PubMed:<a href="http://www.uniprot.org/citations/33168626" target="\_blank">33168626</a>). 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:<a href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>). 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:<a href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>). Binds to DNA in a sequence-independent manner (PubMed:<a href="http://www.uniprot.org/citations/27178839" target="\_blank">27178839</a>). Interacts with EIF3G, and thereby inhibits the EIF3 machinery and protein synthesis, and activates caspase-7 to amplify apoptosis (PubMed:<a href="http://www.uniprot.org/citations/17094969" target="\_blank">17094969</a>). Plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells (PubMed:<a href="http://www.uniprot.org/citations/19418225" target="\_blank">19418225</a>). 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:<a href="http://www.uniprot.org/citations/26004228" target="\_blank">26004228</a>).

### 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

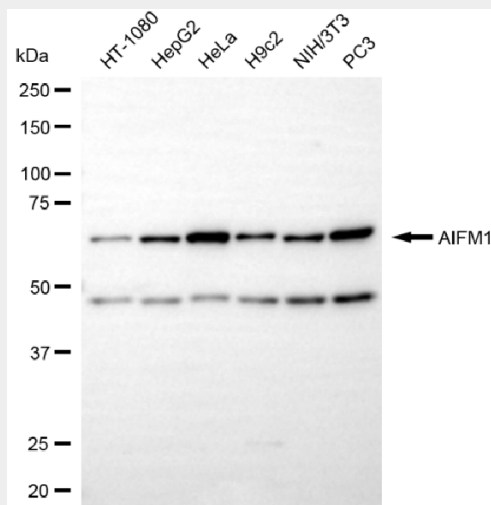
Expressed in all tested tissues (PubMed:16644725). Detected in muscle and skin fibroblasts (at protein level) (PubMed:23217327). Expressed in osteoblasts (at protein level) (PubMed:28842795). [Isoform 4]: Expressed in all tested tissues except brain.

## KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody - Protocols

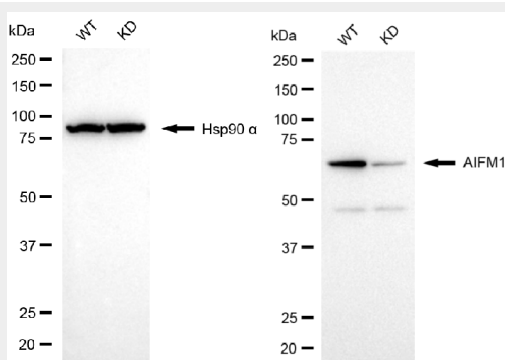
Provided below are standard protocols that you may find useful for product applications.

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

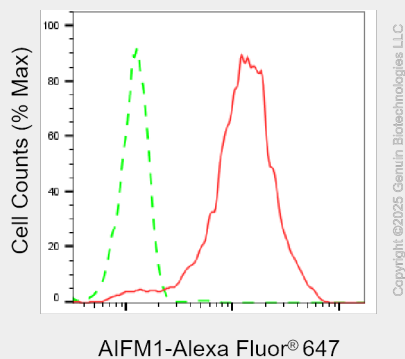
## KD-Validated Anti-AIFM1 Rabbit Monoclonal Antibody - Images



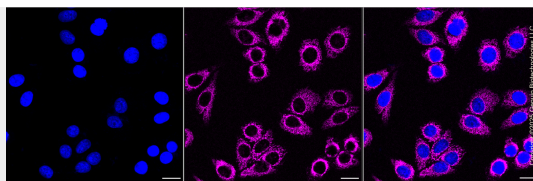
Western blotting analysis using anti-AIFM1 antibody (Cat#AGI1299). Total cell lysates (30  $\mu$ g) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-AIFM1 antibody (Cat#AGI1299, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-AIFM1 antibody (Cat#AGI1299). AIFM1 expression in wild-type (WT) and AIFM1 knockdown (KD) HeLa cells with 20  $\mu$ g of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-AIFM1 antibody (Cat#AGI1299, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of AIFM1 expression in HepG2 cells using anti-AIFM1 antibody (Cat#AGI1299, 1:2,000). Green, isotype control; red, AIFM1.



Immunocytochemical staining of HepG2 cells with anti-AIFM1 antibody (Cat#AGI1299, 1:1,000). Nuclei were stained blue with DAPI; AIFM1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar, 20  $\mu$ m.