

**Goat Anti-AIFM1 Antibody (internal region)**  
**Purified Goat Polyclonal Antibody**  
**Catalog # AF4206a****Specification**

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**Goat Anti-AIFM1 Antibody (internal region) - Product Information**

|                   |  |
|-------------------|--|
| Application       | WB, IF, IHC  |
| Primary Accession | <a href="#">O95831</a>   |
| Other Accession   | <a href="#">NP_004199.1</a> , <a href="#">NP_665811.1</a> , <a href="#">NP_001124319.1</a> |
| Reactivity        | Human  |
| Predicted         | Human, Cow   |
| Host              | Goat   |
| Clonality         | Polyclonal   |
| Concentration     | 0.5  |
| Calculated MW     | 66901  |

**Goat Anti-AIFM1 Antibody (internal region) - Additional Information****Gene ID** 9131**Other Names**

AIFM1; apoptosis-inducing factor, mitochondrion-associated, 1; AIF; CMTX4; COWCK; COXPD6; PDCD8; apoptosis-inducing factor 1, mitochondrial; programmed cell death 8 (apoptosis-inducing factor); striatal apoptosis-inducing factor

**Format**

Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.

**Immunogen**

Peptide with sequence C-DDPNVTKTLRFKQ, from the internal region of the protein sequence according to [NP\\_004199.1](#); [NP\\_665811.1](#); [NP\\_001124319.1](#).

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-AIFM1 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-AIFM1 Antibody (internal region) - Protein Information****Name** AIFM1 ([HGNC:8768](#))**Synonyms** AIF, PDCD8

## Function

Functions both as NADH oxidoreductase and as regulator of apoptosis (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/17094969" target="\_blank">17094969</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.

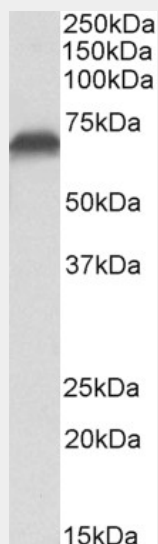
## Goat Anti-AIFM1 Antibody (internal region) - Protocols

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

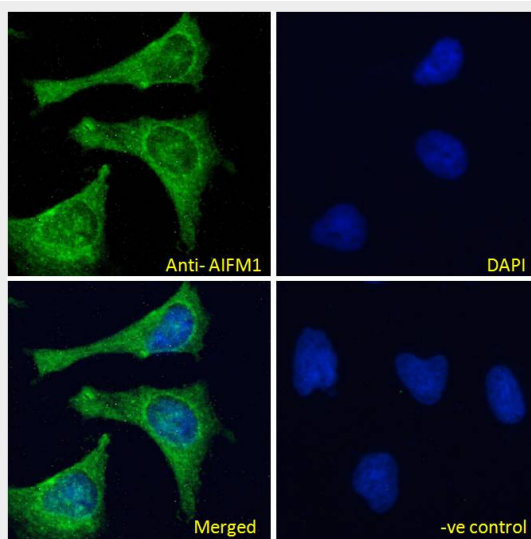
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

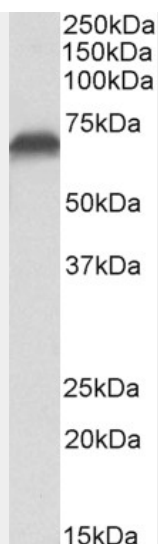
### Goat Anti-AIFM1 Antibody (internal region) - Images



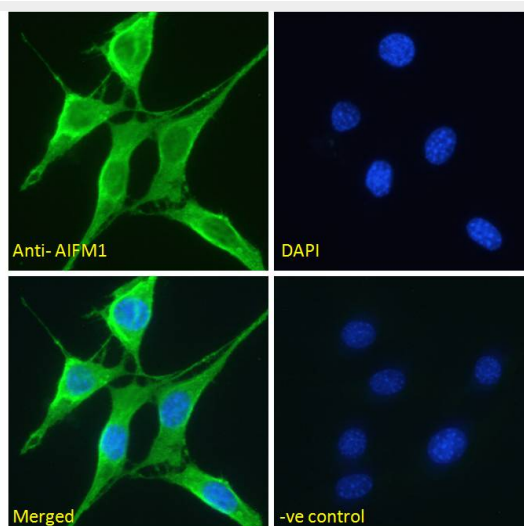
AF4206a (0.1 µg/ml) staining of Jurkat lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



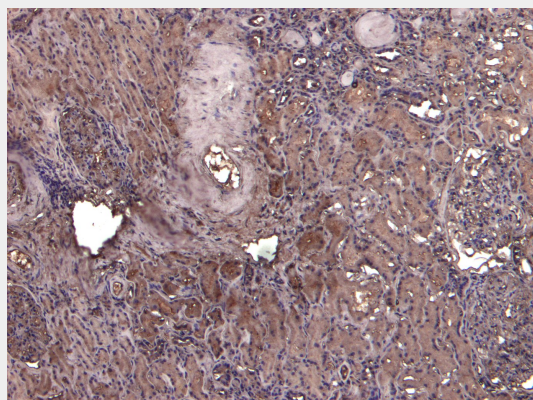
EB12621 Immunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (4ug/ml), showing Mitochondrial staining. The nuclear stain is DAPI



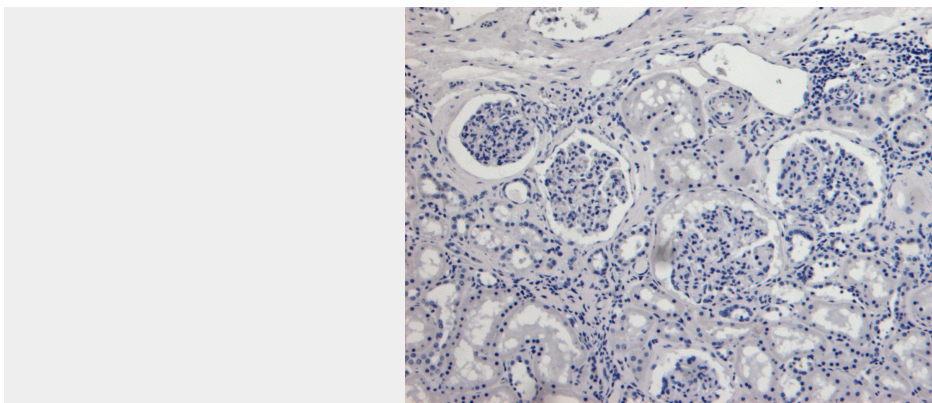
EB12621 (0.1 $\mu$ g/ml) staining of Jurkat lysate (35 $\mu$ g protein in RIPA buffer). Detected by chemiluminescence.



EB12621 Immunofluorescence analysis of paraformaldehyde fixed NIH3T3 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (5 $\mu$ g/ml) followed by Alexa Fluor 488 secondary antibody (2 $\mu$ g/ml), showing Mitochondrial staining. The nuclear stain is DAPI



EB12621 (5 $\mu$ g/ml) staining of paraffin embedded Human Kidney. Heat induced antigen retrieval with citrate buffer Ph 6, HRP-staining.



EB12621 Negative Control showing staining of paraffin embedded Human Kidney, with no primary antibody.

#### **Goat Anti-AIFM1 Antibody (internal region) - References**

The enzymatic activity of apoptosis-inducing factor supports energy metabolism benefiting the growth and invasiveness of advanced prostate cancer cells. Lewis EM, Wilkinson AS, Jackson JS, Mehra R, Varambally S, Chinnaiyan AM, Wilkinson JC. The Journal of biological chemistry 2012 Dec 287 (52): 43862-75.