

Product datasheet for **TA337148**

AIF (AIFM1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, IP, Simple Western, WB
Recommended Dilution:	Immunohistochemistry, Immunoprecipitation: 1:50-1:200, Western Blot: 1:1000-1:2000~, Immunohistochemistry-Paraffin: 1:1000-1:5000~, Immunohistochemistry-Frozen: 1:1000-1:5000, Simple Western: 1:500, Knockout Validated
Reactivity:	Human, Mouse, Rat, Bovine, Canine
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	(aa 151-170); human
Formulation:	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Whole antisera
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	apoptosis inducing factor, mitochondria associated 1
Database Link:	NP_665811 Entrez Gene 26926 Mouse Entrez Gene 83533 Rat Entrez Gene 9131 Human O95831



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Background:

AIF (apoptosis-inducing factor) was initially discovered as a protein involved in caspase-independent cell death. It is now known that AIF has both vital and lethal functions (reviewed in Modjtahedi et al, 2006). In healthy cells, AIF is a flavoprotein present in the mitochondria where it has vital roles in cellular redox metabolism and mitochondrial bioenergetics. In many models of apoptosis, AIF is released from the mitochondria during mitochondrial outer membrane permeabilization along with other mitochondrial proteins. Upon release, AIF translocates first to the cytosol and then to the nucleus where it induces chromatin condensation and DNA degradation. Although several lines of evidence suggest that AIF is a main mediator of caspase-independent cell death, the mechanisms regulating AIF pro-apoptotic function remain to be fully elucidated and may depend on the cell type and type of apoptotic stimuli. Human AIF is transcribed from a nuclear gene located on the X chromosome and translated in the cytoplasm to a precursor protein of 613 amino acids (aa) which corresponds to ~67 kDa. The precursor protein is imported into the mitochondria by mitochondrial localization sequences located within the N-terminal prodomain of AIF. Once inside the mitochondria, the prodomain is cleaved giving rise to a mature AIF form of ~57 kDa. AIF isoforms generated from a single AIF gene have been identified, including AIF short isoform 2 (324 aa protein; GenBank no. AAY84739.1) and AIF short isoform 3 (237 aa protein; GenBank no. AAY84741.1 (reviewed in Deltre et al, 2006). The generation of multiple isoforms from a common gene is an evolutionary mechanism that increases protein diversity in eukaryotes. Regulating gene expression through the production of multiple isoforms from a single gene is thought to play a major role in the control of apoptosis and other forms of programmed cell death. It recognizes AIF and AIF isoforms containing the peptide immunogen sequence, RARDPGARVLIVSEDPELP.

Synonyms:

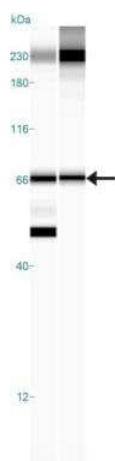
AIF; CMT2D; CMTX4; COWCK; COXPD6; NADMR; NAMSD; PDCD8

Protein Families:

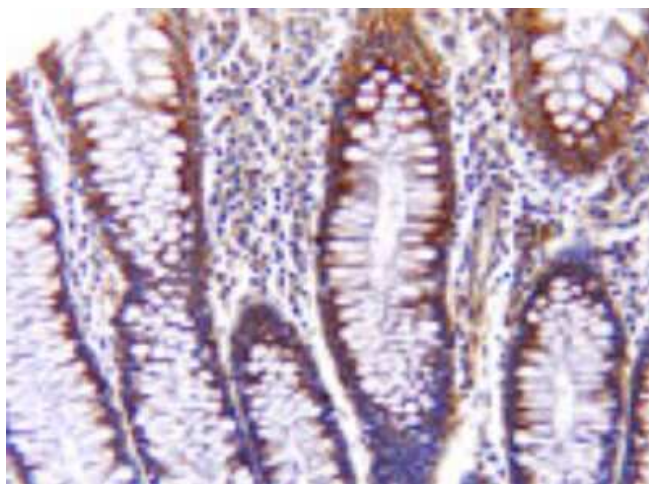
Druggable Genome, Transmembrane

Protein Pathways:

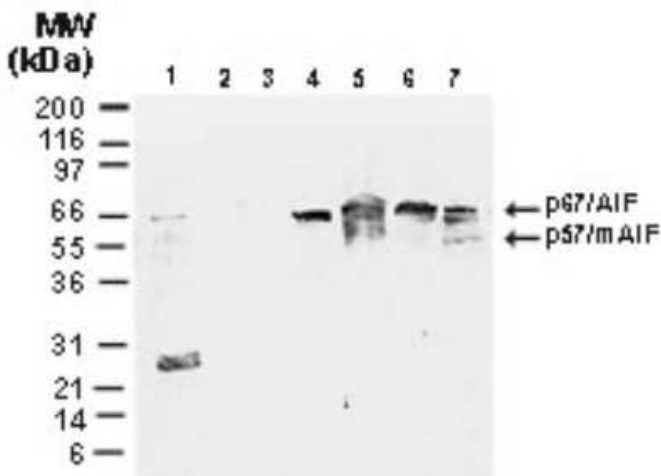
Apoptosis

Product images:

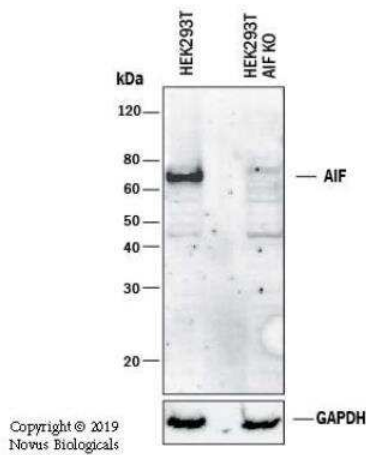
Simple Western: AIF Antibody TA337148 - Simple Western lane view shows a specific band for AIF in 0.2 mg/ml of Jurkat and MCF-7 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. *Non-specific interaction with the 230 kDa standard may be seen with this antibody.



Immunohistochemistry-Paraffin: AIF Antibody TA337148 - Staining of AIF in formalin-fixed, paraffin-embedded normal human colon using this antibody at 1:2000. Hematoxylin-eosin counterstain. In this example, AIF expression is predominant in the upper part of the crypt.



Western Blot: AIF Antibody TA337148 - Analysis of AIF in human colon using this antibody. Lane 1, normal colon. Lanes 2-7, colon carcinoma tissue lysates from 6 different patients. mAIF, thought to represent mitochondrial AIF.



Knockout Validated: AIF Antibody TA337148 - Western blot shows lysates of HEK293T human embryonic kidney parental cell line and AIF knockout (KO) HEK293T cell line. PVDF membrane was probed with 1:1000 of Rabbit Anti-Human AIF Polyclonal Antibody (Catalog # TA337148) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog #HAF008). Specific band was detected for HDAC1 at approximately 68 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in the knockout HEK293T cell line. This experiment was conducted under reducing conditions.