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AIFM2 Rabbit pAb

Catalog # AP100253

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9BRQ8
Other Accession	Q9BRQ8
Predicted	Rat, Pig, Human, Mouse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40527
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human AMID/AIFM2
Epitope Specificity	121-180/373
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the FAD-dependent oxidoreductase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Oxidoreductase, which may play a role in mediating a p53/TP53-dependent apoptosis response. Probable oxidoreductase that acts as a caspase-independent mitochondrial effector of apoptotic cell death. Binds to DNA in a sequence-independent manner. May contribute to genotoxin-induced growth arrest. Tissue specificity: Detected in most normal tissues as two transcripts of 1.8 and 4.0 kb in length, respectively. Highly expressed in heart, moderately in liver and skeletal muscles, and expressed at low levels in placenta, lung, kidney, and pancreas. Both transcripts expressed following p53/TP53 induction. The shorter 1.8 kb transcript seems to be the major transcript in EB1 colon cancer cells.

Additional Information

Gene ID	84883
Other Names	AMID; FSP1; PRG3; 5430437E11Rik; D730001I10Rik; FSP1_HUMAN; AIFM2; Apoptosis-inducing factor homologous mitochondrion-associated inducer of death (AMID); p53-responsive gene 3 protein; 1.6.5.-; FSP1_MOUSE; AIF family member 2, ferroptosis suppressor; AIF family member 2; apoptosis inducing factor mitochondria associated 2; apoptosis-inducing factor, mitochondrion-associated, 2; apoptosis-inducing factor (AIF)-like mitochondrion-associated inducer of death; ferroptosis suppressor 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Protein Information

Name	AIFM2 {ECO:0000303|PubMed:26689472, ECO:0000312|HGNC:HGNC:21411}
Function	A NAD(P)H-dependent oxidoreductase that acts as a key inhibitor of ferroptosis (PubMed:31634899, PubMed:31634900, PubMed:35922516, PubMed:36788244, PubMed:37957306, PubMed:39881208, PubMed:37739993, PubMed:39160155, PubMed:38414669, PubMed:40233740). At the plasma membrane, catalyzes reduction of coenzyme Q/ubiquinone-10 to ubiquinol-10, a lipophilic radical-trapping antioxidant that prevents lipid oxidative damage and consequently ferroptosis (PubMed:31634899, PubMed:31634900, PubMed:37739993, PubMed:39160155, PubMed:38414669, PubMed:40233740). Acts in parallel to GPX4 to suppress phospholipid peroxidation and ferroptosis (PubMed:31634899, PubMed:31634900). This anti-ferroptotic function is independent of cellular glutathione levels (PubMed:31634899, PubMed:31634900). Also acts as a potent radical- trapping antioxidant by mediating warfarin-resistant vitamin K reduction in the canonical vitamin K cycle: catalyzes NAD(P)H-dependent reduction of vitamin K (phylloquinone, menaquinone-4 and menadione) to hydroquinone forms (PubMed:35922516, PubMed:36788244). Hydroquinones act as potent radical-trapping antioxidants inhibitor of phospholipid peroxidation and ferroptosis (PubMed:35922516). May play a role in mitochondrial stress signaling (PubMed:26689472). Upon oxidative stress, associates with the lipid peroxidation end product 4-hydroxy-2- nonenal (HNE) forming a lipid adduct devoid of oxidoreductase activity, which then translocates from mitochondria into the nucleus triggering DNA damage and cell death (PubMed:26689472). Capable of DNA binding in a non-sequence specific way (PubMed:15958387).
Cellular Location	Lipid droplet. Cell membrane; Lipid-anchor. Cytoplasm Mitochondrion membrane. Nucleus
Tissue Location	Detected in most normal tissues as two transcripts of 1.8 and 4.0 kb in length, respectively. Highly expressed in heart, moderately in liver and skeletal muscles, and expressed at low levels in placenta, lung, kidney, and pancreas. Both transcripts expressed following p53/TP53 induction. The shorter 1.8 kb transcript seems to be the major transcript in EB1 colon cancer cells

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.