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AMID Polyclonal Antibody

Catalog # AP68393

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q9BRQ8
Reactivity	Human, Mouse, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40527

Additional Information

Gene ID	84883
Other Names	AIFM2; AMID; PRG3; Apoptosis-inducing factor 2; Apoptosis-inducing factor homologous mitochondrion-associated inducer of death; Apoptosis-inducing factor-like mitochondrion-associated inducer of death; p53-responsive gene 3 protein
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/40000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

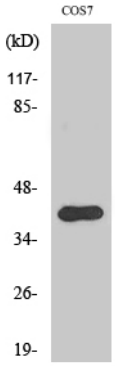
Name	AIFM2 {ECO:0000303|PubMed:26689472, ECO:0000312|HGNC:HGNC:21411}
Function	A NAD(P)H-dependent oxidoreductase that acts as a key inhibitor of ferroptosis (PubMed:31634899, PubMed:31634900, PubMed:35922516, PubMed:36788244, PubMed:37957306, PubMed:39881208, PubMed:37739993, PubMed:39160155, PubMed:38414669, 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

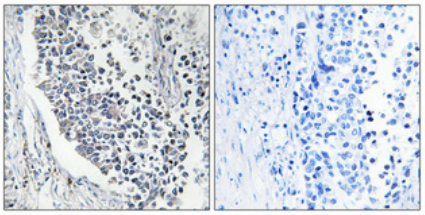
Background

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.

Images



Western Blot analysis of various cells using AMID Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.

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