10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AIFM2 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP1355b

Specification

AIFM2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession	Q9BRQ8

AIFM2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 84883

Other Names
Apoptosis-inducing factor 2, 1---, Apoptosis-inducing factor homologous mitochondrion-associated inducer of death, Apoptosis-inducing factor-like mitochondrion-associated inducer of death, p53-responsive gene 3 protein, AIFM2, AMID, PRG3 {ECO:0000303|PubMed:12135761}

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1355b was selected from the C-term region of human AIFM2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

AIFM2 Antibody (C-term) Blocking Peptide - 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). 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). Acts in parallel to GPX4 to suppress phospholipid peroxidation and ferroptosis (PubMed:31634899, PubMed:<a

href="http://www.uniprot.org/citations/31634900" target="_blank">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). 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

AIFM2 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

AIFM2 Antibody (C-term) Blocking Peptide - Images

AIFM2 Antibody (C-term) Blocking Peptide - Background

AIFM2 is significant homology to NADH oxidoreductases and the apoptosis-inducing factor PDCD8/AIF. The protein has been shown to induce apoptosis. This protein is found to be induced by tumor suppressor protein p53 in colon caner cells.

AIFM2 Antibody (C-term) Blocking Peptide - References

Ohiro Y., Garkavtsev I.FEBS Lett. 524:163-171(2002) Wu M., Xu L.-G., Su T.Oncogene 23:6815-6819(2004)