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Product datasheet

Recombinant Human AIF protein ab151343

Description

Product name	Recombinant Human AIF protein
Purity	> 95 % SDS-PAGE. Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE
Endotoxin level	< 1.000 Eu/µg
Expression system	Escherichia coli
Accession	O95831
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MGSSHHHHHHSSGLVPRGSHMEEVPQDKAPSHVPFLLIG GGTAAFAAARS IRARDPGARVLIVSEDPELPYMRPPLSKELWFSDDPNVTK TLRFKQWNGK ERSIYFQPPSFYVSAQDLPHIENGGVAVLTGKKVVQLDVR DNMVKLNDGS QITYEKCLIATGGTPRSLSAIDRAGAEVKSRTTLFRKIGDFR SLEKISRE VKSITIIGGGFLGSELACALGRKARALGTEVIQLFPEKGNM GKILPEYLS NWTMEKVRREGVKVMPNAIVQSVGVSSGKLLIKLKDGRK VETDHIVAAVG LEPNVELAKTGGLEIDSDFGGFRVNAELQARSNIWVAGDA ACFYDIKLGR RRVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDL GPDVGYEAIGLVD SSLPTVGVFAKATAQDNPKSATEQSGTGIRSESETESEAS EITIPPSTPA VPQAPVQGEDYGKGVIFYLRDKVVVGIVLWNIFNRMPIARK IIKDGEQHE DLNEVAKLFNIHED
Predicted molecular weight	67 kDa including tags
Amino acids	121 to 613
Tags	His tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab151343** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE HPLC
Form	Lyophilized

Preparation and Storage

Stability and Storage	Shipped at 4°C. After reconstitution store at -20ºC. Avoid freeze / thaw cycles. pH: 7.20 Constituents: 99% Phosphate Buffer, 0.88% Sodium chloride
Reconstitution	Dissolve the lyophilized protein in 1X PBS. It is not recommended to reconstitute to a concentration less than 100 µg/ml.

General Info

Function	Probable oxidoreductase that has a dual role in controlling cellular life and death; during apoptosis, it is translocated from the mitochondria to the nucleus to function as a proapoptotic factor in a caspase-independent pathway, while in normal mitochondria, it functions as an antiapoptotic factor via its oxidoreductase activity. The soluble form (AIFsol) found in the nucleus induces 'parthanatos' i.e., caspase-independent fragmentation of chromosomal DNA. Interacts with EIF3G,and thereby inhibits the EIF3 machinery and protein synthesis, and activates casapse-7 to amplify apoptosis. Plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells. Binds to DNA in a sequence-independent manner.
Involvement in disease	Defects in AIFM1 are the cause of combined oxidative phosphorylation deficiency type 6 (COXPD6) [MIM:300816]. It is a mitochondrial disease resulting in a neurodegenerative disorder characterized by psychomotor delay, hypotonia, areflexia, muscle weakness and wasting.
Sequence similarities	Belongs to the FAD-dependent oxidoreductase family.
Post-translational modifications	Under normal conditions, a 54-residue N-terminal segment is first proteolytically removed during or just after translocation into the mitochondrial intermembrane space (IMS) by the mitochondrial processing peptidase (MPP) to form the inner-membrane-anchored mature form (AIFmit). During apoptosis, it is further proteolytically processed at amino-acid position 101 leading to the generation of the 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 in a caspase-independent manner.
Cellular localization	Mitochondrion intermembrane space. Mitochondrion inner membrane. Cytoplasm. Nucleus. Cytoplasm > perinuclear region. 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. Colocalizes with EIF3G in the nucleus and perinuclear region.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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