

Recombinant Human AIFM1, His-tagged

Cat. No. AIFM1-21H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Apoptosis-Inducing Factor 1, Mitochondrial/AIFM1 is produced by our E. coli expression system. The target protein is expressed with sequence (Glu121-Asp613) of Human AIFM1 fused with a 6His tag at the N-terminus.
Species	Human
Source	E.coli
ProteinLength	121-613 a.a.
Description	Apoptosis-Inducing Factor 1, Mitochondrial (AIFM1) is a flavoprotein essential for nuclear disassembly in apoptotic cells that is found in the mitochondrial intermembrane space in healthy cells. 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. AIFM1 interacts with EIF3G, and thereby inhibits the EIF3 machinery and protein synthesis, and activates caspase-7 to amplify apoptosis. It binds to DNA in a sequence-independent manner and plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells.
Form	Lyophilized from a 0.2 µM filtered solution of 20mM PB, 150mM NaCl, pH 7.2
AA Sequence	MGSSHHHHHSSGLVPRGSHMEEVPQDKAPSHVPFLIGGGTAAFAAARSIRARDP

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GARVLIVSE DPELPYMRPPLSKELWFSDDPNVTKLRFKQWNGKERSIYFQPPSFY
VSAQDLPHIENGGVAVLT GKKVVQLDVRDNMVKLNDGSQITYEKCLIATGGTPRSLS
AIDRAGAEVKSRTTLFRKIGDFRSLE KISREVKSITIIGGGFLGSELACALGRKARALG
TEVIQLFPEKGNMGKILPEYLSNWTMEKVRRE GVKVMPNAIVQSVGVSSGKLLIKLK
DGRKVETDHIVA AVGLEPNVELAKTGGLEIDSDFGGFRVN AELQARSNIWVAGDAA
CFYDIKLGRRRVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDLGPD VGYEA
IGLVDSSLPTVGVFAKATAQDNPKSATEQSGTGIRSESETESEASEITIPPSTPAVPQ
AP VQGEDYGKGVIFYLRDKVVVGIVLWNIFNRMPIARKIIKDGEQHEDLNEVAKLFNI
HED

Endotoxin	Less than 0.1 ng/μg (1 IEU/μg).
Purity	Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.
Storage	Lyophilized protein should be stored at Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 μg/ml. Dissolve the lyophilized protein in 1X PBS. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

GENE INFORMATION

Gene Name	AIFM1 apoptosis-inducing factor, mitochondrion-associated, 1 [Homo sapiens]
Official Symbol	AIFM1
Synonyms	AIFM1; apoptosis-inducing factor, mitochondrion-associated, 1; PDCD8, programmed cell death 8 (apoptosis inducing factor); apoptosis-inducing factor 1, mitochondrial;

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	AIF; striatal apoptosis-inducing factor; programmed cell death 8 (apoptosis-inducing factor); PDCD8; COXPD6; MGC111425;
Gene ID	9131
mRNA Refseq	NM_001130846
Protein Refseq	NP_001124318
MIM	300169
UniProt ID	O95831
Chromosome Location	Xq26.1
Pathway	Apoptosis, organism-specific biosystem; Apoptosis, conserved biosystem; Apoptosis Modulation by HSP70, organism-specific biosystem; Ceramide signaling pathway, organism-specific biosystem;
Function	DNA binding; electron carrier activity; flavin adenine dinucleotide binding; oxidoreductase activity; protein binding;