



# Recombinant Protein Technical Manual

## Recombinant Human AIFM1 Protein (His Tag)

RPES2948

### Product Data:

**Product SKU:** RPES2948

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** O95831

### Protein Information:

**Molecular Mass:** 56.2 kDa

**AP Molecular Mass:** 68 kDa

**Tag:** N-6His

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.2.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Apoptosis-Inducing Factor 1 Mitochondrial; Programmed Cell Death Protein 8; AIFM1; AIF; PDCD8

## Immunogen Information:

**Sequence:** Glu121-Asp613

## Background:

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.