

## **AIF Blocking Peptide**

Catalog # PBV10082b

#### **Specification**

#### **AIF Blocking Peptide - Product Information**

Primary Accession O95831
Gene ID 9131
Calculated MW 66901

## **AIF Blocking Peptide - Additional Information**

**Gene ID 9131** 

Application & Usage The peptide is used for blocking the

antibody activity of AIF. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for

30 minutes at 37°C

**Other Names** 

Apoptosis-inducing factor 1, mitochondrial, 1.1.1.-, Programmed cell death protein 8, AIFM1, AIF, PDCD8

Target/Specificity

AIF

#### **Formulation**

 $50~\mu g$  (0.2 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 0.1% BSA and 0.02% thimerosal.

**Reconstitution & Storage** 

-20 °C

# **Background Descriptions**

### **Precautions**

AIF Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

## **AIF Blocking Peptide - Protein Information**

Name AIFM1 (HGNC:8768)

Synonyms AIF, PDCD8

#### **Function**

Functions both as NADH oxidoreductase and as regulator of apoptosis (PubMed:<a



href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>, PubMed:<a href="http://www.uniprot.org/citations/23217327" target="\_blank">23217327</a>, PubMed:<a href="http://www.uniprot.org/citations/17094969" target="\_blank">17094969</a>, PubMed:<a href="http://www.uniprot.org/citations/33168626" target="\_blank">33168626</a>). In response to apoptotic stimuli, it is released from the mitochondrion intermembrane space into the cytosol and to the nucleus, where it functions as a proapoptotic factor in a caspase- independent pathway (PubMed:<a href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>). Release into the cytoplasm is mediated upon binding to poly-ADP-ribose chains (By similarity). The soluble form (AIFsol) found in the nucleus induces 'parthanatos' i.e. caspase-independent fragmentation of chromosomal DNA (PubMed:<a

href="http://www.uniprot.org/citations/20362274" target="\_blank">20362274</a>). Binds to DNA in a sequence-independent manner (PubMed:<a href="http://www.uniprot.org/citations/27178839" target="\_blank">27178839</a>). Interacts with EIF3G, and thereby inhibits the EIF3 machinery and protein synthesis, and activates caspase-7 to amplify apoptosis (PubMed:<a href="http://www.uniprot.org/citations/17094969" target="\_blank">17094969</a>). Plays a critical role in caspase-independent, pyknotic cell death in hydrogen peroxide-exposed cells (PubMed:<a href="http://www.uniprot.org/citations/19418225" target="\_blank">19418225</a>). In contrast, participates in normal mitochondrial metabolism. Plays an important role in the regulation of respiratory chain biogenesis by interacting with CHCHD4 and controlling CHCHD4 mitochondrial import (PubMed:<a href="http://www.uniprot.org/citations/26004228" target=" blank">26004228</a>).

#### **Cellular Location**

Mitochondrion intermembrane space. Mitochondrion inner membrane. Cytoplasm. Nucleus. Cytoplasm, perinuclear region. Note=Proteolytic cleavage during or just after translocation into the mitochondrial intermembrane space (IMS) results in the formation of an inner-membrane-anchored mature form (AlFmit). During apoptosis, further proteolytic processing leads to a mature form, which is confined to the mitochondrial IMS in a soluble form (AlFsol). AlFsol is released to the cytoplasm in response to specific death signals, and translocated to the nucleus, where it induces nuclear apoptosis (PubMed:15775970). Release into the cytoplasm is mediated upon binding to poly-ADP-ribose chains (By similarity) Translocation into the nucleus is promoted by interaction with (auto- poly-ADP-ribosylated) processed form of PARP1 (PubMed:33168626) Colocalizes with EIF3G in the nucleus and perinuclear region (PubMed:17094969). {ECO:0000250|UniProtKB:Q9Z0X1, ECO:0000269|PubMed:15775970, ECO:0000269|PubMed:17094969, ECO:0000269|PubMed:33168626} [Isoform 4]: Mitochondrion. Cytoplasm, cytosol. Note=In pro-apoptotic conditions, is released from mitochondria to cytosol in a calpain/cathepsin-dependent manner.

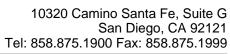
## **Tissue Location**

Expressed in all tested tissues (PubMed:16644725). Detected in muscle and skin fibroblasts (at protein level) (PubMed:23217327). Expressed in osteoblasts (at protein level) (PubMed:28842795). [Isoform 4]: Expressed in all tested tissues except brain.

## **AIF Blocking Peptide - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture





# **AIF Blocking Peptide - Images**