

**MCA1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP6721a****Specification**

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**MCA1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q12904](#)**MCA1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 9255**Other Names**

Aminoacyl tRNA synthase complex-interacting multifunctional protein 1, Multisynthase complex auxiliary component p43, Endothelial monocyte-activating polypeptide 2, EMAP-2, Endothelial monocyte-activating polypeptide II, EMAP-II, Small inducible cytokine subfamily E member 1, AIMP1, EMAP2, SCYE1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP6721a](/products/AP6721a) was selected from the N-term region of human MCA1. 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.

**MCA1 Antibody (N-term) Blocking Peptide - Protein Information****Name** AIMP1**Synonyms** EMAP2, SCYE1**Function**

Non-catalytic component of the multisynthase complex. Stimulates the catalytic activity of cytoplasmic arginyl-tRNA synthase (PubMed:<http://www.uniprot.org/citations/10358004> target="\_blank">10358004</a>). Binds tRNA. Possesses inflammatory cytokine activity (PubMed:<http://www.uniprot.org/citations/11306575> target="\_blank">11306575</a>). Negatively regulates TGF-beta signaling through stabilization of SMURF2 by binding to SMURF2 and inhibiting its SMAD7- mediated degradation (By similarity). Involved in glucose homeostasis through induction of glucagon secretion at low glucose levels (By similarity). Promotes dermal

fibroblast proliferation and wound repair (PubMed:<a href="http://www.uniprot.org/citations/16472771" target="\_blank">16472771</a>). Regulates KDELR1-mediated retention of HSP90B1/gp96 in the endoplasmic reticulum (By similarity). Plays a role in angiogenesis by inducing endothelial cell migration at low concentrations and endothelial cell apoptosis at high concentrations (PubMed:<a href="http://www.uniprot.org/citations/12237313" target="\_blank">12237313</a>). Induces maturation of dendritic cells and monocyte cell adhesion (PubMed:<a href="http://www.uniprot.org/citations/11818442" target="\_blank">11818442</a>). Modulates endothelial cell responses by degrading HIF-1A through interaction with PSMA7 (PubMed:<a href="http://www.uniprot.org/citations/19362550" target="\_blank">19362550</a>).

#### **Cellular Location**

Nucleus. Cytoplasm, cytosol. Secreted. Endoplasmic reticulum {ECO:0000250|UniProtKB:P31230}. Golgi apparatus {ECO:0000250|UniProtKB:P31230}. Note=Enriched in secretory vesicles of pancreatic alpha cells and secreted from the pancreas in response to low glucose levels (By similarity). Secreted in response to hypoxia (PubMed:10850427). Also secreted in response to both apoptotic and necrotic cell death. {ECO:0000250|UniProtKB:P31230, ECO:0000269|PubMed:10850427}

#### **MCA1 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

#### **MCA1 Antibody (N-term) Blocking Peptide - Images**

#### **MCA1 Antibody (N-term) Blocking Peptide - Background**

MCA1 is a cytokine that is specifically induced by apoptosis, and it is involved in the control of angiogenesis, inflammation, and wound healing. The release of this cytokine renders the tumor-associated vasculature sensitive to tumor necrosis factor. The precursor protein is identical to the p43 subunit, which is associated with the multi-tRNA synthetase complex, and it modulates aminoacylation activity of tRNA synthetase in normal cells. This protein is also involved in the stimulation of inflammatory responses after proteolytic cleavage in tumor cells.

#### **MCA1 Antibody (N-term) Blocking Peptide - References**

Awasthi,N., Lab. Invest. 89 (1), 38-46 (2009)Sen,E., Clin Lung Cancer 9 (3), 166-170 (2008)