

# AGK Antibody (C-term) Blocking Peptide

Synthetic peptide Catalog # BP9238b

## **Specification**

# AGK Antibody (C-term) Blocking Peptide - Product Information

**Primary Accession** 

Q53H12

# AGK Antibody (C-term) Blocking Peptide - Additional Information

**Gene ID 55750** 

#### **Other Names**

Acylglycerol kinase, mitochondrial, hAGK, Multiple substrate lipid kinase, HsMuLK, MuLK, Multi-substrate lipid kinase, AGK, MULK

# Target/Specificity

The synthetic peptide sequence used to generate the antibody <a href=/products/AP9238b>AP9238b</a> was selected from the C-term region of human AGK. 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**

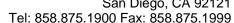
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

## AGK Antibody (C-term) Blocking Peptide - Protein Information

Name AGK {ECO:0000303|PubMed:15939762, ECO:0000312|HGNC:HGNC:21869}

## **Function**

Lipid kinase that can phosphorylate both monoacylglycerol and diacylglycerol to form lysophosphatidic acid (LPA) and phosphatidic acid (PA), respectively (PubMed:<a href="http://www.uniprot.org/citations/15939762" target="\_blank">15939762</a>). Does not phosphorylate sphingosine (PubMed:<a href="http://www.uniprot.org/citations/15939762" target="\_blank">15939762</a>). Phosphorylates ceramide (By similarity). Phosphorylates 1,2-dioleoylglycerol more rapidly than 2,3- dioleoylglycerol (By similarity). Independently of its lipid kinase activity, acts as a component of the TIM22 complex (PubMed:<a href="http://www.uniprot.org/citations/28712724" target="\_blank">28712724</a>, PubMed:<a href="http://www.uniprot.org/citations/28712726" target="\_blank">28712726</a>). The TIM22 complex mediates the import and insertion of multi-pass transmembrane proteins into the mitochondrial inner membrane by forming a twin-pore translocase that uses the membrane





potential as the external driving force (PubMed:<a

href="http://www.uniprot.org/citations/28712724" target=" blank">28712724</a>, PubMed:<a href="http://www.uniprot.org/citations/28712726" target="blank">28712726</a>). In the TIM22 complex, required for the import of a subset of metabolite carriers into mitochondria, such as ANT1/SLC25A4 and SLC25A24, while it is not required for the import of TIMM23 (PubMed:<a href="http://www.uniprot.org/citations/28712724" target=" blank">28712724</a>). Overexpression increases the formation and secretion of LPA, resulting in transactivation of EGFR and activation of the downstream MAPK signaling pathway, leading to increased cell growth (PubMed:<a href="http://www.uniprot.org/citations/15939762" target=" blank">15939762</a>).

#### **Cellular Location**

Mitochondrion inner membrane; Peripheral membrane protein. Mitochondrion intermembrane space. Note=Localizes in the mitochondrion intermembrane space, where it associates with the inner membrane (PubMed:28712724). It is unclear whether the N-terminal hydrophobic region forms a transmembrane region or associates with the membrane without crossing it (PubMed:28712724, PubMed:28712726)

#### **Tissue Location**

Highly expressed in muscle, heart, kidney and brain.

### AGK Antibody (C-term) Blocking Peptide - Protocols

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

# • Blocking Peptides

AGK Antibody (C-term) Blocking Peptide - Images

#### AGK Antibody (C-term) Blocking Peptide - Background

AGK can phosphorylate both monoacylglycerol and diacylglycerol to form lysophosphatidic acid (LPA) and phosphatidic acid (PA), respectively.

## AGK Antibody (C-term) Blocking Peptide - References

Nouh, M.A., et.al, Cancer Sci. 100 (9), 1631-1638 (2009) Epand, R.M., et.al, Biochemistry 46 (49), 14225-14231 (2007)