

**CMPK2 Antibody (Center) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP5206c****Specification**

---

**CMPK2 Antibody (Center) Blocking peptide - Product Information**Primary Accession [Q5EBM0](#)**CMPK2 Antibody (Center) Blocking peptide - Additional Information****Gene ID** 129607**Other Names**

UMP-CMP kinase 2, mitochondrial, Nucleoside-diphosphate kinase, CMPK2

**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.

**CMPK2 Antibody (Center) Blocking peptide - Protein Information****Name** CMPK2**Function**

Mitochondrial nucleotide monophosphate kinase needed for salvage dNTP synthesis that mediates immunomodulatory and antiviral activities through IFN-dependent and IFN-independent pathways (PubMed: [17999954](http://www.uniprot.org/citations/17999954), PubMed: [30083606](http://www.uniprot.org/citations/30083606), PubMed: [36930652](http://www.uniprot.org/citations/36930652), PubMed: [37075076](http://www.uniprot.org/citations/37075076)). Restricts the replication of multiple viruses including flaviviruses or coronaviruses (PubMed: [30083606](http://www.uniprot.org/citations/30083606), PubMed: [36930652](http://www.uniprot.org/citations/36930652), PubMed: [37075076](http://www.uniprot.org/citations/37075076)). Together with viperin/RSAD2 and ddhCTP, suppresses the replication of several coronaviruses through inhibition of the viral RNA-dependent RNA polymerase activities (PubMed: [36930652](http://www.uniprot.org/citations/36930652)). Concerning flaviviruses, restricts RNA translation when localized to the mitochondria independently of its kinase activity (PubMed: [37075076](http://www.uniprot.org/citations/37075076)). Is able to phosphorylate dUMP, dCMP, CMP, UMP and monophosphates of the pyrimidine nucleoside analogs ddC, dFdC, araC, BVDU and FdUrd with ATP as phosphate donor. Efficacy is highest for dUMP followed by dCMP while CMP and UMP are poor

substrates. Controls therefore mitochondrial DNA synthesis by supplying required deoxyribonucleotides (By similarity). CMPK2-dependent mitochondrial DNA synthesis is necessary for the production of oxidized mitochondrial DNA fragments after exposure to NLRP3 activators (By similarity). In turn, cytosolic oxidized mtDNA associates with the NLRP3 inflammasome complex and is required for its activation (By similarity).

**Cellular Location**

Mitochondrion Note=Mitochondrial localization is required for its antiviral function

**Tissue Location**

High levels are observed in myeloid, lymphoid and mesenchymal tissues.

**CMPK2 Antibody (Center) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

**CMPK2 Antibody (Center) Blocking peptide - Images**