

**Phospho-MAP4K1(S171) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3451a**

**Specification**

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**Phospho-MAP4K1(S171) Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">O92918</a>
Other Accession	<a href="#">P70218</a>
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

**Phospho-MAP4K1(S171) Antibody - Additional Information**

**Gene ID** 11184

**Other Names**

Mitogen-activated protein kinase kinase kinase kinase 1, Hematopoietic progenitor kinase, MAPK/ERK kinase kinase kinase 1, MEK kinase kinase 1, MEKKK 1, MAP4K1, HPK1

**Target/Specificity**

This MAP4K1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S171 of human MAP4K1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-MAP4K1(S171) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-MAP4K1(S171) Antibody - Protein Information**

**Name** MAP4K1 ([HGNC:6863](#))

**Synonyms** HPK1

**Function** Serine/threonine-protein kinase, which plays a role in the response to environmental stress (PubMed:[24362026](#)). Appears to act upstream of the JUN N-terminal pathway (PubMed:[8824585](#)). Activator of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. MAP4Ks act in parallel to and are partially redundant with STK3/MST2 and STK4/MST2 in the phosphorylation and activation of LATS1/2, and establish MAP4Ks as components of the expanded Hippo pathway (PubMed:[26437443](#)). May play a role in hematopoietic lineage decisions and growth regulation (PubMed:[24362026](#), PubMed:[8824585](#)). Together with CLNK, it enhances CD3-triggered activation of T-cells and subsequent IL2 production (By similarity).

#### Tissue Location

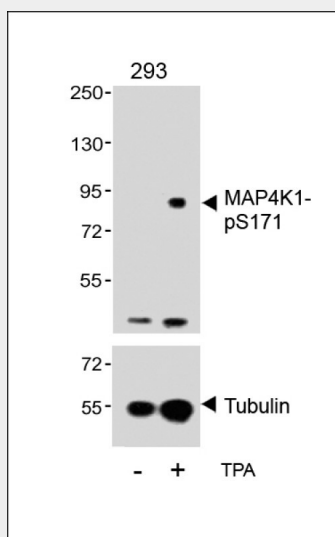
Expressed primarily in hematopoietic organs, including bone marrow, spleen and thymus. Also expressed at very low levels in lung, kidney, mammary glands and small intestine

#### Phospho-MAP4K1(S171) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Phospho-MAP4K1(S171) Antibody - Images



Western blot analysis of lysates from 293 cell line, untreated or treated with TPA, 200nM, 30min, using MAP4K1-pS171(upper) or Tubulin (lower).

#### Phospho-MAP4K1(S171) Antibody - Background

The c-Jun amino-terminal kinases (JNKs)/stress-activated protein kinases (SAPKs) play a crucial role in stress responses in mammalian cells. The mechanism underlying this pathway in the hematopoietic system is unclear, but it is a key in understanding the molecular basis of blood cell

differentiation. We have cloned a novel protein kinase, termed hematopoietic progenitor kinase 1 (HPK1), that is expressed predominantly in hematopoietic cells, including early progenitor cells. HPK1 is related distantly to the p21(Cdc42/Rac1)-activated kinase (PAK) and yeast STE20 implicated in the mitogen-activated protein kinase (MAPK) cascade. Expression of HPK1 activates JNK1 specifically, and it elevates strongly AP-1-mediated transcriptional activity in vivo. HPK1 binds and phosphorylates MEKK1 directly, whereas JNK1 activation by HPK1 is inhibited by a dominant-negative MEKK1 or MKK4/SEK mutant. Interestingly, unlike PAK65, HPK1 does not contain the small GTPase Rac1/Cdc42-binding domain and does not bind to either Rac1 or Cdc42, suggesting that HPK1 activation is Rac1/Cdc42-independent. These results indicate that HPK1 is a novel functional activator of the JNK/SAPK signaling pathway.

#### **Phospho-MAP4K1(S171) Antibody - References**

Hu M.C.-T., Genes Dev. 10:2251-2264(1996).  
Beausoleil S.A., Proc. Natl. Acad. Sci. U.S.A. 101:12130-12135(2004).  
Wissing J., Mol. Cell. Proteomics 6:537-547(2007).

#### **Phospho-MAP4K1(S171) Antibody - Citations**

- [Molecular mechanisms controlling translation in a hibernator.](#)