

Phospho-MAP4K1(Y381) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3360a

Specification

Phospho-MAP4K1(Y381) Antibody - Product Information

Application	DB,E
Primary Accession	O92918
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

Phospho-MAP4K1(Y381) 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 Y381 of human MAP4K1.

Dilution

DB~~1:500

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(Y381) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-MAP4K1(Y381) Antibody - Protein Information

Name MAP4K1

Synonyms HPK1

Function Serine/threonine-protein kinase, which may play a role in the response to environmental stress (PubMed:[24362026](#)). Appears to act upstream of the JUN N-terminal pathway

(PubMed:[8824585](#)). May play a role in hematopoietic lineage decisions and growth regulation (PubMed:[8824585](#), PubMed:[24362026](#)). Able to autophosphorylate (PubMed:[8824585](#)). Together with CLNK, it enhances CD3-triggered activation of T-cells and subsequent IL2 production (By similarity).

Tissue Location

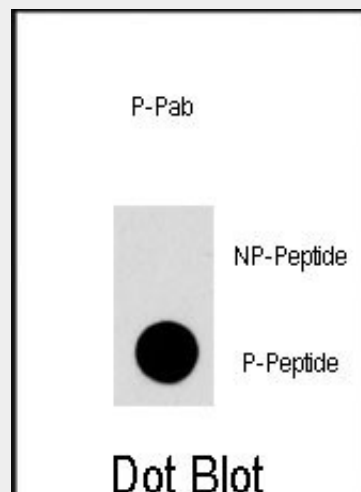
Expressed primarily in hematopoietic organs, including bone marrow, spleen and thymus. Also expressed at very low levels in lung, kidney, mammary glands and small intestine

Phospho-MAP4K1(Y381) 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(Y381) Antibody - Images



Dot blot analysis of anti-MAP4K1-pY381 Phospho-specific Pab (Cat.#AP3360a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Phospho-MAP4K1(Y381) 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(Y381) 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).