10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MAP4K1 (HPK1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7971b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q92918
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1208
Calculated MW	91296
Antigen Region	321-350

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 (HPK1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 321-350 amino acids from the C-terminal region of human MAP4K1 (HPK1).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
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	MAP4K1 (HPK1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

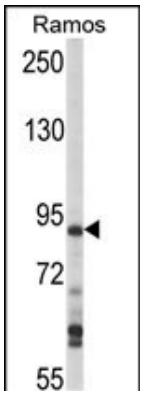
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

References

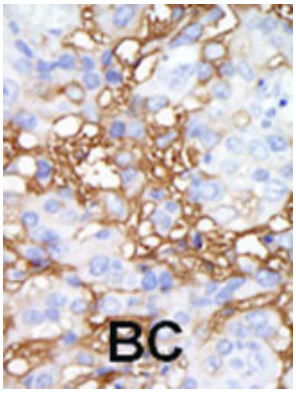
Sawasdikosol, S., et al., Blood 101(9):3687-3689 (2003).
Hu, M.C., et al., Genes Dev. 10(18):2251-2264 (1996).

Images



Western blot analysis of hHPK1-C335 (Cat. #AP7971b) in Ramos cell line lysates (35ug/lane). HPK1 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical



relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.