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MAP2K2 Antibody (T394)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7961d

Product Information

Application	IHC-P, IF, WB, E
Primary Accession	P36507
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14015
Calculated MW	44424
Antigen Region	372-400

Additional Information

Gene ID	5605
Other Names	Dual specificity mitogen-activated protein kinase kinase 2, MAP kinase kinase 2, MAPKK 2, ERK activator kinase 2, MAPK/ERK kinase 2, MEK 2, MAP2K2, MEK2, MKK2, PRKMK2
Target/Specificity	This MAP2K2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 372-400 amino acids from human MAP2K2.
Dilution	IHC-P~~1:100~500 IF~~1:10~50 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	MAP2K2 Antibody (T394) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP2K2
Synonyms	MEK2, MKK2, PRKMK2

Function	Catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in MAP kinases. Activates the ERK1 and ERK2 MAP kinases (By similarity). Activates BRAF in a KSR1 or KSR2-dependent manner; by binding to KSR1 or KSR2 releases the inhibitory intramolecular interaction between KSR1 or KSR2 protein kinase and N-terminal domains which promotes KSR1 or KSR2-BRAF dimerization and BRAF activation (PubMed:29433126).
Cellular Location	Cytoplasm. Membrane; Peripheral membrane protein. Note=Membrane localization is probably regulated by its interaction with KSR1.

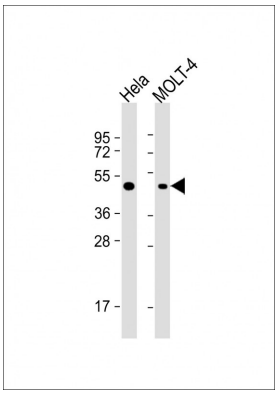
Background

MAP2K2 is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is known to play a critical role in mitogen growth factor signal transduction. It phosphorylates and thus activates MAPK1/ERK2 and MAPK2/ERK3. The activation of this kinase itself is dependent on the Ser/Thr phosphorylation by MAP kinase kinase kinases. The inhibition or degradation of this kinase is found to be involved in the pathogenesis of Yersinia and anthrax.

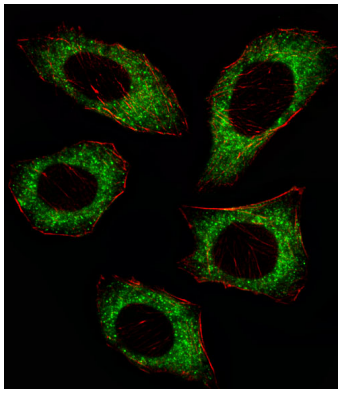
References

Burroughs, K.D., et al., Mol. Cancer Res. 1(4):312-322 (2003).
Tran, H., et al., Mol. Cell. Biol. 23(20):7177-7188 (2003).
Li, S.P., et al., Cancer Res. 63(13):3473-3477 (2003).
Li, Y., et al., J. Biol. Chem. 278(16):13663-13671 (2003).
Liu, X., et al., J. Biol. Chem. 277(42):39312-39319 (2002).

Images

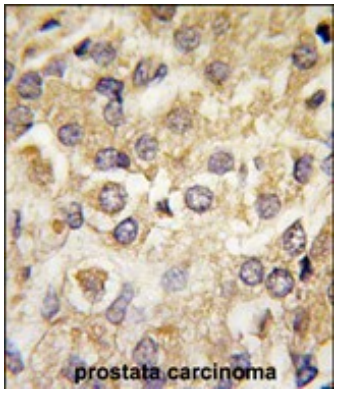


All lanes : Anti-MAP2K2 Antibody (T394) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: MOLT-4 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Fluorescent image of U251 cell stained with MAP2K2 Antibody (T394)(Cat#AP7961d/SA080220AJ).U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with MAP2K2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). MAP2K2 immunoreactivity is localized to Cytoplasm significantly.

Formalin-fixed and paraffin-embedded human prostata



carcinoma tissue reacted with MAP2K2 Antibody (T394) (Cat.#AP7961d), 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.