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

MAP3K7IP1-S423 Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6861a

Product Information

Application	WB, E
Primary Accession	Q15750
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB12711
Calculated MW	54644
Antigen Region	401-430

Additional Information

Gene ID	10454
Other Names	TGF-beta-activated kinase 1 and MAP3K7-binding protein 1, Mitogen-activated protein kinase kinase kinase 7-interacting protein 1, TGF-beta-activated kinase 1-binding protein 1, TAK1-binding protein 1, TAB1, MAP3K7IP1
Target/Specificity	This MAP3K7IP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 401-430 amino acids from human MAP3K7IP1.
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	MAP3K7IP1-S423 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TAB1
Synonyms	MAP3K7IP1
Function	Key adapter protein that plays an essential role in JNK and NF-kappa-B

activation and proinflammatory cytokines production in response to stimulation with TLRs and cytokines (PubMed:22307082, PubMed:24403530). Mechanistically, associates with the catalytic domain of MAP3K7/TAK1 to trigger MAP3K7/TAK1 autophosphorylation leading to its full activation (PubMed:10838074, PubMed:25260751, PubMed:37832545). Similarly, associates with MAPK14 and triggers its autophosphorylation and subsequent activation (PubMed:11847341, PubMed:29229647). In turn, MAPK14 phosphorylates TAB1 and inhibits MAP3K7/TAK1 activation in a feedback control mechanism (PubMed:14592977). Also plays a role in recruiting MAPK14 to the TAK1 complex for the phosphorylation of the TAB2 and TAB3 regulatory subunits (PubMed:18021073).

Cellular Location Cytoplasm, cytosol. Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side. Note=Recruited to the endoplasmic reticulum following interaction with STING1

Tissue Location Ubiquitous..

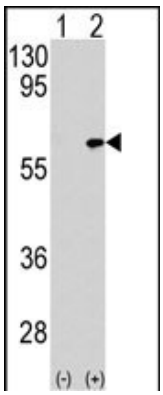
Background

MAP3K7IP1 was identified as a regulator of the MAP kinase kinase kinase MAP3K7/TAK1, which is known to mediate various intracellular signaling pathways, such as those induced by TGF beta, interleukin 1, and WNT-1. This protein interacts and thus activates TAK1 kinase. It has been shown that the C-terminal portion of this protein is sufficient for binding and activation of TAK1, while a portion of the N-terminus acts as a dominant-negative inhibitor of TGF beta, suggesting that this protein may function as a mediator between TGF beta receptors and TAK1. This protein can also interact with and activate the mitogen-activated protein kinase 14 (MAPK14/p38alpha), and thus represents an alternative activation pathway, in addition to the MAPKK pathways, which contributes to the biological responses of MAPK14 to various stimuli.

References

Arch,R.H., et.al., Genes Dev. 12 (18), 2821-2830 (1998)
Yamaguchi,K., et.al., EMBO J. 18 (1), 179-187 (1999)

Images



Western blot analysis of MAP3K7IP1 (arrow) using rabbit polyclonal MAP3K7IP1-pS423 (Cat. #AP6861a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the MAP3K7IP1 gene (Lane 2) (Origene Technologies).