

**Phospho-MAP3K7IP1(T431) Antibody Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP3448a****Specification**

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**Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - Product Information**

Primary Accession [O15750](#)  
Other Accession [NP\\_006107](#)

**Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - 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**

The synthetic peptide sequence used to generate the antibody [AP3448a](/products/AP3448a) was selected from the region of human Phospho-MAP3K7IP1-T431. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - 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](http://www.uniprot.org/citations/22307082), PubMed: [24403530](http://www.uniprot.org/citations/24403530)). Mechanistically, associates with the catalytic domain of MAP3K7/TAK1 to trigger MAP3K7/TAK1 autophosphorylation leading to its full activation (PubMed: [10838074](http://www.uniprot.org/citations/10838074), PubMed: [10838074](#)).

href="http://www.uniprot.org/citations/25260751" target="\_blank">25260751</a>, PubMed:<a href="http://www.uniprot.org/citations/37832545" target="\_blank">37832545</a>). Similarly, associates with MAPK14 and triggers its autophosphorylation and subsequent activation (PubMed:<a href="http://www.uniprot.org/citations/11847341" target="\_blank">11847341</a>, PubMed:<a href="http://www.uniprot.org/citations/29229647" target="\_blank">29229647</a>). In turn, MAPK14 phosphorylates TAB1 and inhibits MAP3K7/TAK1 activation in a feedback control mechanism (PubMed:<a href="http://www.uniprot.org/citations/14592977" target="\_blank">14592977</a>). Plays also a role in recruiting MAPK14 to the TAK1 complex for the phosphorylation of the TAB2 and TAB3 regulatory subunits (PubMed:<a href="http://www.uniprot.org/citations/18021073" target="\_blank">18021073</a>).

#### 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..

### Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - Protocols

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

- [Blocking Peptides](#)

### Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - Images

### Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - 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.

### Phospho-MAP3K7IP1(T431) Antibody Blocking peptide - References

Conner,S.H., Biochem. J. 399 (3), 427-434 (2006)Zhou,H., Mol. Cell. Biol. 26 (10), 3824-3834 (2006)Singhirunnusorn,P., J. Biol. Chem. 280 (8), 7359-7368 (2005)Jin,J., Curr. Biol. 14 (16), 1436-1450 (2004)