

## Rabbit Polyclonal Anti-MAP3K12 antibody

Catalog Number: MAP3K12-101AP

Lot Number:

### General Information

<b>Product</b>	MAP3K12 Antibody
<b>Description</b>	Affinity Purified Mitogen-activated protein kinase kinase kinase 12 Antibody
<b>Accession #</b>	Uniprot: Q12852 GenBank: AAH50050.1
<b>Verified Applications</b>	ELISA, IP, WB
<b>Species Cross Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 270-320 on MAP3K12 protein
<b>Alternative Nomenclature</b>	DLK antibody, Dual leucine zipper bearing kinase antibody, Leucine-zipper protein kinase antibody, Map3k12 antibody, MAPK-upstream kinase antibody, MEKK12 antibody, mitogen-activated protein kinase kinase kinase 12 antibody, MUK antibody, ZPKP1 antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.68 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

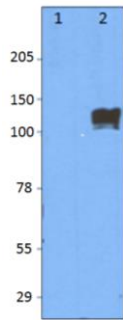
<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

### Related Products

<b>BIOTIN-Conjugated</b>	MAP3K12-BIOTIN
<b>FITC-Conjugated</b>	MAP3K12-FITC
<b>Antigenic Blocking Peptide</b>	P-MAP3K12
<b>Western Blot Positive Control</b>	PC-MAP2K12

### Catalog #

## Application Verification:



Western Blot of MAP3K12 antibody (MAP3K12-101AP).

1. Mock transfected cells
2. MAP3K12 transfected cells (PC-MAP3K12)

1:500 antibody dilution in DiluOBuffer.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

## Overview:

Mitogen-activated protein kinase kinase kinase 12 (MAP3K12) is a MAP kinase kinase kinase enzyme belonging to the serine/threonine protein kinase family (1). Located on human chromosome 12q13, it regulates the activity of various MAPKKs such as MAPKK7 and hence activating C-Jun N-terminal Kinase (JNK/SAPK). MAP3K12 associates with scaffold proteins, JIPs, which also interacts with MAPKK7 and JNK/SAPK (2). MAP3K12 protein is associated with dotted structures that are regularly located with Golgi apparatus and also along the microtubules (3). This protein contains two leucine-zipper-like motifs and interaction of MAP3K12-binding inhibitory protein with one of these motifs deactivates this protein and induces activation of SAPK/JNK (4). MAP3K12 is also implicated in regulating radial cell migration via microtubule-based events. It has been reported that ectopic expression of this protein in neuronal precursor cells allows these cells to migrate from the ventricular zone and differentiate into neural cells (3).

MAP3K12 was identified as a signaling molecule that is required for the regulation of keratinocyte terminal differentiation and cornification (5). While MAP3K12 is found in the epidermis, it is highly restricted to the neuronal cells in the central, peripheral and autonomic nervous systems. More specifically, it is localized in the axons of these cells (6). It has been shown that over-expression of MAP3K12 in cos-1 cells impairs the radial organization of microtubules without massive depolymerization. In humans, MAP3K12 is approximately a 68kDa protein (567 amino acids). In rat and mouse this protein weighs 107kDa (888 amino acids).

The MAP3K12 antibodies were generated using synthetic peptide corresponding to the human MAP3K12 protein. MAP3K12 antibodies are affinity purified over immobilized antigen based affinity chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. Western blot positive control in ready-to-use SDS-sample buffer (PC-MAP3K12) and antigenic blocking peptide (P-MAP3K12) are available. MAP3K12-101AP will label ~ 68 kDa protein in PC-MAP3K12. Antibodies can be conjugated with fluorescent probes or other secondary enzymes upon request at extra charge. For a complete listing of all FabGennix antibodies and services, please visit <http://fabgennix.com>.

### References:

1. Douziech M, et al. Localization of the mixed-lineage kinase DLK/MUK/ZPK to the golgi apparatus in NIH 3T3 cells. *J Histochem Cytochem.* 1999; 47(10):1287-1296.
2. Ito M, et al. JSAP1, a novel Jun N-terminal protein kinase (JNK)-binding protein that functions as a scaffold factor in the JNK signaling pathway. *Mol. Cell Biol.* 1999; 19:7539-7548.
3. Hirai S, et al. MAPK-upstream protein kinase (MUK) regulates the radial migration of immature neurons in telencephalon of mouse embryo. *Development.* October 2002; 129(19):4483-4495.
4. Fukuyama K, et al. MAPK upstream kinase (MUK)-binding protein, a negative regulator of MUK/dual leucine zipper-bearing kinase/leucine zipper protein kinase. *J Biol Chem.* 14 July 2000; 275(28):21247-21254.
5. Robitaille H, et al. The mitogen-activated protein kinase kinase dual leucine zipper-bearing kinase (DLK) acts as a key regulator of keratinocyte terminal differentiation. *J Biol Chem.* April 2005; 280(13):12732-12741.
6. Hirai S, et al. Expression of MUD/DLK/ZPK, an activator of the JNK pathway, in the nervous systems of the developing mouse embryo. *Gene Expr. Patterns.* April 2005; 5(4):517-523.

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