

Phospho-MSK1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10218**Specification**

Phospho-MSK1 Antibody - Product Information

Application	WB
Primary Accession	O75582
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	89865

Phospho-MSK1 Antibody - Additional Information**Gene ID 9252****Application & Usage**

Western blot (0.5-4 µg/ml). However, the optimal conditions should be determined individually. Phospho-MSK1(Thr581) detects 90 kDa MSK1 only when phosphorylated at Thr581. The antibody does not cross-react with nonphosphorylated MSK1 or MSK1 phosphorylated at other sites. It does not cross-react with RSK1, RSK2 or RSK3.

Other Names

MSK1, MSPK1, MGC1911 , RLPK , RSKL

Target/Specificity

Phospho-MSK1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit anti-Phospho-MSK1(Thr581) polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

Phospho-MSK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-MSK1 Antibody - Protein Information

Name RPS6KA5

Synonyms MSK1

Function

Serine/threonine-protein kinase that is required for the mitogen or stress-induced phosphorylation of the transcription factors CREB1 and ATF1 and for the regulation of the transcription factors RELA, STAT3 and ETV1/ER81, and that contributes to gene activation by histone phosphorylation and functions in the regulation of inflammatory genes (PubMed:11909979, PubMed:12569367, PubMed:12763138, PubMed:9687510, PubMed:18511904, PubMed:9873047). Phosphorylates CREB1 and ATF1 in response to mitogenic or stress stimuli such as UV-C irradiation, epidermal growth factor (EGF) and anisomycin (PubMed:11909979, PubMed:9873047). Plays an essential role in the control of RELA transcriptional activity in response to TNF and upon glucocorticoid, associates in the cytoplasm with the glucocorticoid receptor NR3C1 and contributes to RELA inhibition and repression of inflammatory gene expression (PubMed:12628924, PubMed:18511904). In skeletal myoblasts is required for phosphorylation of RELA at 'Ser-276' during oxidative stress (PubMed:12628924). In erythropoietin-stimulated cells, is necessary for the 'Ser-727' phosphorylation of STAT3 and regulation of its transcriptional potential (PubMed:12763138). Phosphorylates ETV1/ER81 at 'Ser-191' and 'Ser-216', and thereby regulates its ability to stimulate transcription, which may be important during development and breast tumor formation (PubMed:12569367). Directly represses transcription via phosphorylation of 'Ser-1' of histone H2A (PubMed:15010469). Phosphorylates 'Ser-10' of histone H3 in response to mitogenics, stress stimuli and EGF, which results in the transcriptional activation of several immediate early genes, including proto-oncogenes c-fos/FOS and c-jun/JUN (PubMed:12773393). May also phosphorylate 'Ser-28' of histone H3 (PubMed:12773393). Mediates the mitogen- and stress-induced phosphorylation of high mobility group protein 1 (HMGN1/HMG14) (PubMed:12773393). In lipopolysaccharide-stimulated primary macrophages, acts downstream of the Toll-like receptor TLR4 to limit the production of pro-inflammatory cytokines (By similarity). Functions probably by inducing transcription of the MAP kinase phosphatase DUSP1 and the anti-inflammatory cytokine interleukin 10 (IL10), via CREB1 and ATF1 transcription factors (By similarity). Plays a role in neuronal cell death by mediating the downstream effects of excitotoxic injury (By similarity).

Phosphorylates TRIM7 at 'Ser-107' in response to growth factor signaling via the MEK/ERK pathway, thereby stimulating its ubiquitin ligase activity (PubMed:25851810).

Cellular Location

Nucleus. Cytoplasm. Note=Predominantly nuclear. Exported into cytoplasm in response to glucocorticoid

Tissue Location

Widely expressed with high levels in heart, brain and placenta. Less abundant in lung, kidney and liver

Phospho-MSK1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-MSK1 Antibody - Images**Phospho-MSK1 Antibody - Background**

MSK1, a Mitogen and Stress activated protein Kinase, is activated by ERK as well as p38 MAPK in response to growth factors and various cellular stress stimuli. MSK1 resembles RSK by having two kinase domains connected by a regulator linker region. Phosphorylation of RSK1 at Ser 364, Ser381 and Thr574 is critical for RSK1 activity. These sites are analogous to Ser360, Ser376 and Thr581 of MSK1 and maybe important for MSK1 activity as well.