

## Product datasheet for PH300549

### MSK1 (RPS6KA5) (NM\_182398) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	RPS6KA5 MS Standard C13 and N15-labeled recombinant protein (NP_872198)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC200549
Predicted MW:	61.8 kDa
Protein Sequence:	>RC200549 protein sequence Red=Cloning site Green=Tags(s)

MEEEGSSGGAAGTSADGGDGGQQLLTVKHELRTANLTGHAEKVGIENFELLKVLGTGAYGKVFVLRKIS  
GHDTGKLYAMKVLKATIVQKAKTTEHTRTERQVLEHIRQSPFLVTLHYAFQTETKLHLILDYINGGELF  
THLSQRERFTEHEVQIYVGEIVLAEHLHKLGIYRDIKENILLDSNGHVVLDFGLSKEFVADETERA  
YSFCGTIEYMAPDIVRGGDSGHDKAVDWWSLGVLMEYELLTGASPFVDGKNSQAEISRRILKSEPPYPQ  
EMSALAKDLIQRLMKDPKPKRLGCGPRDADEIKEHLFFQKINWDDLAACKVPAPFKPVIREDLVDNSFAE  
EFTMDPTYS PAALPQSSEKLFQGYSFVAPSILFKRNAVIDPLQFHMGVERPGVTNVARSAMMKDSPFY  
QHYDLDLKDKPLGEGSFSICRKC VHKKSQAFVKKIISKRMEANTQKEITALKLCEGHPNIVKLHEVFHD  
QLHTFLVMELLLNGGELFERIKKKKHFSETEASYIMRKLVS AVSHMHDVGVVHRDLKPEV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_872198</u>
RefSeq Size:	2343
RefSeq ORF:	1647



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**Synonyms:** MSK1; MSPK1; RLPK

**Locus ID:** 9252

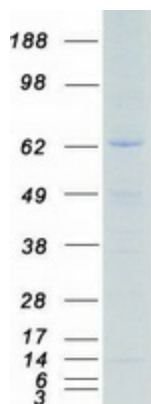
**UniProt ID:** [O75582](#)

**Cytogenetics:** 14q32.11

**Summary:** 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).[UniProtKB/Swiss-Prot Function]

**Protein Families:** Druggable Genome, Protein Kinase, Transcription Factors

**Protein Pathways:** Bladder cancer, MAPK signaling pathway, Neurotrophin signaling pathway

**Product images:**

Coomassie blue staining of purified RPS6KA5 protein (Cat# [TP300549]). The protein was produced from HEK293T cells transfected with RPS6KA5 cDNA clone (Cat# [RC200549]) using MegaTran 2.0 (Cat# [TT210002]).