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

Anti-MSK1 Picoband Antibody
Catalog # ABO11959

Specification

Anti-MSK1 Picoband Antibody - Product Information

Application	**WB, IHC-P, ICC**
Primary Accession	O75582
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Ribosomal protein S6 kinase alpha-5(RPS6KA5) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-MSK1 Picoband Antibody - Additional Information

Gene ID 9252

Other Names
Ribosomal protein S6 kinase alpha-5, S6K-alpha-5, 2.7.11.1, 90 kDa ribosomal protein S6 kinase 5, Nuclear mitogen- and stress-activated protein kinase 1, RSK-like protein kinase, RSKL, RPS6KA5, MSK1

Calculated MW
89865 MW KDa

Application Details
Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Nucleus. Cytoplasm. Predominantly nuclear. Exported into cytoplasm in response to glucocorticoid.

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

Protein Name
Ribosomal protein S6 kinase alpha-5

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

E.coli-derived human MSK1 recombinant protein (Position: V540-Q665). Human MSK1 shares 98% amino acid (aa) sequence identity with mouse MSK1.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. S6 kinase subfamily.

Anti-MSK1 Picoband 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:18511904, PubMed:9687510, 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

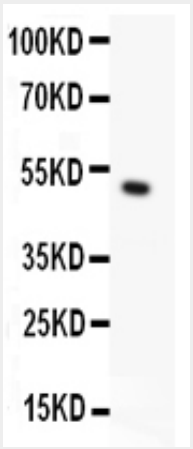
Tissue Location
Widely expressed with high levels in heart, brain and placenta. Less abundant in lung, kidney and liver

Anti-MSK1 Picoband 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 Cytomety
- Cell Culture

Anti-MSK1 Picoband Antibody - Images



Anti- MSK1 Picoband antibody, ABO11959, Western blottingAll lanes: Anti MSK1 (ABO11959) at 0.5ug/mlWB: Recombinant Human MSK1 Protein 0.5ngPredicted bind size: 50KDObserved bind

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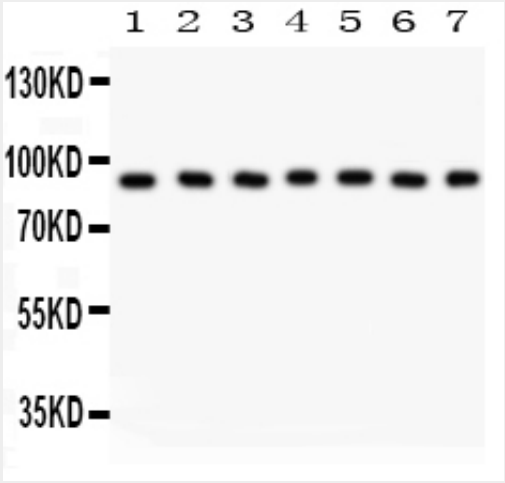
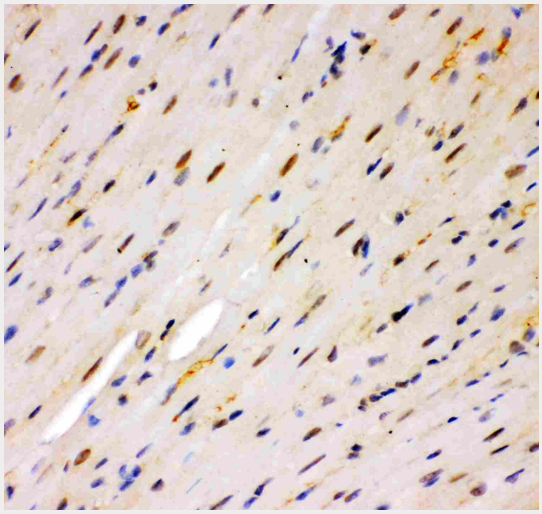
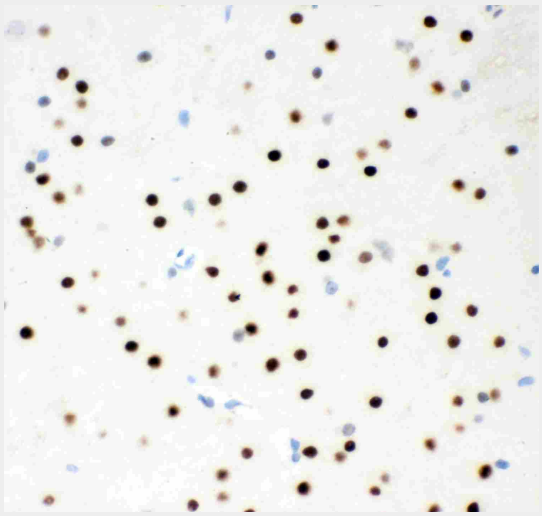
size: 50KD



Anti- MSK1 Picoband antibody, ABO11959, Western blottingAll lanes: Anti MSK1 (ABO11959) at 0.5ug/mlLane 1: Human Placenta Tissue Lysate at 50ugLane 2: Rat Brain Tissue Lysate at 50ugLane 3: JURKAT Whole Cell Lysate at 40ugLane 4: HELA Whole Cell Lysate at 40ugLane 5: PANC Whole Cell Lysate at 40ugLane 6: A549 Whole Cell Lysate at 40ugLane 7: HEPG2 Whole Cell Lysate at 40ugPredicted bind size: 90KDObserved bind size: 90KD



Anti- MSK1 Picoband antibody, ABO11959, IHC(P)IHC(P): Mouse Cardiac Muscle Tissue



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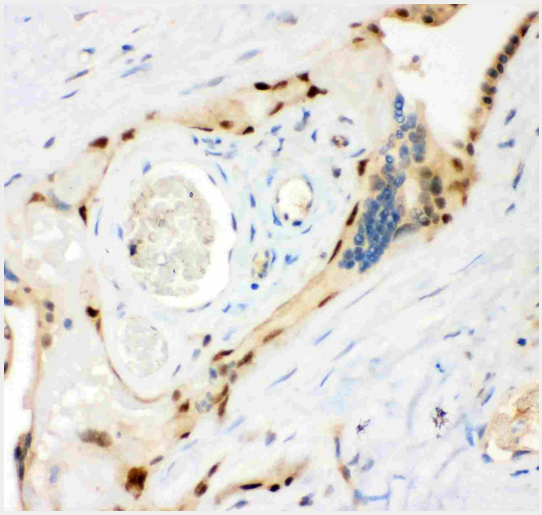
Anti- MSK1 Picoband antibody, ABO11959, IHC(P)IHC(P): Rat Brain Tissue



Anti- MSK1 Picoband antibody, ABO11959, IHC(P)IHC(P): Human Placenta Tissue

Anti-MSK1 Picoband Antibody - Background

Ribosomal protein S6 kinase alpha-5, also known as MSK1, is an enzyme that in humans is encoded by the RPS6KA5 gene. It belongs to the AGC family of kinases. MSK1 gene is mapped to chromosome 14q31-q32. Northern blot analysis indicated that MSK1 was expressed as a 4-kb mRNA in all tissues tested, with the highest levels of expression in brain, muscle, and placenta. MSK1 was activated in vitro and in vivo by either ERK or SAPK2 proteins. It has been found that MSK1, rather than MAPKAP-K1 or MAPKAP-K2/K3, mediates activation of the cAMP response element-binding protein and activating transcription factor-1 by either growth factors or stress signals.