



Rabbit Anti-Phospho-RSK2 (Tyr529) antibody

SL3368R

Product Name:	Phospho-RSK2 (Tyr529)
Chinese Name:	磷酸化核糖体S6激酶RSK2抗体
Alias:	RSK2(Phospho Tyr529); RSK2(Phospho Y529); Rsk 2; MAPKAP Kinase 1b; MAP kinase activated protein kinase 1b; MAPK activated protein kinase 1b; 90 kDa ribosomal protein S6 kinase 3; HU2; HU3; Insulin stimulated protein kinase 1; ISPK1; MAPKAPK 1b; MAPKAPK1B; MRX19; p90 RSK3; p90RSK3; pp90RSK2; Ribosomal protein S6 kinase 90kDa polypeptide 3; Ribosomal protein S6 kinase alpha 3; Ribosomal S6 kinase 2; RPS6KA3; S6 kinase 2; S6K alpha3; KS6A3_HUMAN; CLS; RSK; HU-3; RSK2; MRX19; ISPK-1; p90-RSK2; S6K-alpha3.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	84kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human RSK2 around the phosphorylation site of Tyr529:VE(p-Y)LH
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:

[PubMed](#)

This gene encodes a member of the RSK (ribosomal S6 kinase) family of serine/threonine kinases. This kinase contains 2 non-identical kinase catalytic domains and phosphorylates various substrates, including members of the mitogen-activated kinase (MAPK) signalling pathway. The activity of this protein has been implicated in controlling cell growth and differentiation. Mutations in this gene have been associated with Coffin-Lowry syndrome (CLS). [provided by RefSeq, Jul 2008]

Function:

Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro-apoptotic function of BAD and DAPK1. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1 and histone H3 at 'Ser-10', which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the preinitiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation. Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potently inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin-sensitive signaling independently of the PI3K/AKT pathway. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4). Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression. In LPS-stimulated dendritic cells, is involved in TLR4-induced macropinocytosis, and in myeloma cells, acts as effector of FGFR3-mediated transformation signaling, after direct phosphorylation at Tyr-529 by FGFR3. Phosphorylates DAPK1.

Subunit:

Forms a complex with either MAPK1/ERK2 or MAPK3/ERK1 in quiescent cells. Transiently dissociates following mitogenic stimulation. Interacts with NFATC4, ETV1/ER81 and FGFR1.

Subcellular Location:

Nucleus. Cytoplasm.

Product Detail:

Tissue Specificity:

Expressed in many tissues, highest levels in skeletal muscle.

Post-translational modifications:

Activated by phosphorylation at Ser-227 by PDPK1. Autophosphorylated on Ser-386, as part of the activation process. May be phosphorylated at Thr-365 and Ser-369 by MAPK1/ERK2 and MAPK3/ERK1. Can also be activated via phosphorylation at Ser-386 by MAPKAPK2.

N-terminal myristoylation results in an activated kinase in the absence of added growth factors.

DISEASE:

Defects in RPS6KA3 are the cause of Coffin-Lowry syndrome (CLS) [MIM:303600]. A X-linked mental retardation associated with facial and digital dysmorphisms, progressive skeletal malformations, growth retardation, hearing deficit and paroxysmal movement disorders.

Defects in RPS6KA3 are the cause of mental retardation X-linked type 19 (MRX19) [MIM:300844]. MRX19 is a non-syndromic form of mild to moderate mental retardation. Mental retardation is characterized by significantly below average general intellectual functioning associated with impairments in adaptive behavior and manifested during the developmental period. In contrast to syndromic or specific X-linked mental retardation which also present with associated physical, neurological and/or psychiatric manifestations, intellectual deficiency is the only primary symptom of non-syndromic X-linked mental retardation.

Similarity:

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

Contains 1 AGC-kinase C-terminal domain.

Contains 2 protein kinase domains.

SWISS:

P51812

Gene ID:

6197

Database links:

[Entrez Gene: 6197](#)Human

[Entrez Gene: 110651](#)Mouse

[Entrez Gene: 501560](#)Rat

[Oimim: 300075](#)Human

[SwissProt: P51812](#)Human

[SwissProt: P18654](#)Mouse

[Unigene: 445387](#)Human

[Unigene: 328476](#)Mouse

[Unigene: 204789](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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