

ARG42837
anti-RPS6KA3 / RSK2 antibodyPackage: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes RPS6KA3 / RSK2
Tested Reactivity	Hu, Ms, Rat
Tested Application	WB
Specificity	This antibody might also react to RPS6KA2 (RSK3) and RPS6KA1 (RSK1) based on sequence homology analysis (>80%).
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	RPS6KA3 / RSK2
Species	Human
Immunogen	Recombinant protein corresponding to D393-K733 of Human RPS6KA3 / RSK2.
Conjugation	Un-conjugated
Alternate Names	p90-RSK 3; MAPKAPK1B; ISPK-1; RSK2; S6K-alpha3; MAPKAPK-1b; MAP kinase-activated protein kinase 1b; MAPKAP kinase 1b; p90RSK3; MRX19; S6K-alpha-3; pp90RSK2; Ribosomal protein S6 kinase alpha-3; MAPK-activated protein kinase 1b; CLS; Ribosomal S6 kinase 2; RSK; HU-3; Insulin-stimulated protein kinase 1; p90-RSK2; RSK-2; EC 2.7.11.1; 90 kDa ribosomal protein S6 kinase 3

Application Instructions

Application table	Application	Dilution
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 90 kDa	

Properties

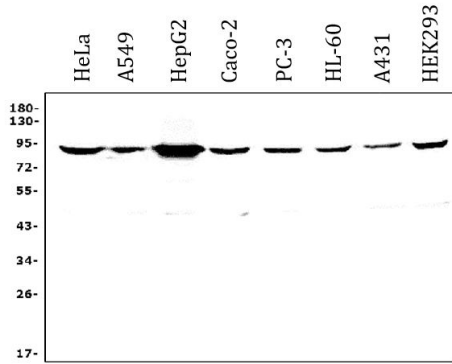
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na ₂ HPO ₄ , 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated

freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

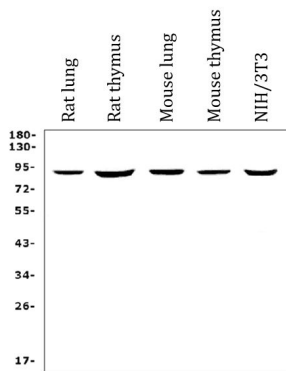
Bioinformation

Gene Symbol	RPS6KA3
Gene Full Name	ribosomal protein S6 kinase, 90kDa, polypeptide 3
Background	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. Negatively regulates EGF-induced MAPK1/3 phosphorylation via phosphorylation of SOS1. Phosphorylates SOS1 at 'Ser-1134' and 'Ser-1161' that create YWHAB and YWHAE binding sites and which contribute to the negative regulation of MAPK1/3 phosphorylation (By similarity). Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:26158630). [UniProt]
Calculated Mw	84 kDa
PTM	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. [UniProt]
Cellular Localization	Nucleus. Cytoplasm. [UniProt]



ARG42837 anti-RPS6KA3 / RSK2 antibody WB image

Western blot: 50 µg of sample under reducing conditions. HeLa, A549, HepG2, Caco-2, PC-3, HL-60, A431 and HEK293 whole cell lysates stained with ARG42837 anti-RPS6KA3 / RSK2 antibody at 0.5 µg/ml dilution, overnight at 4°C.



ARG42837 anti-RPS6KA3 / RSK2 antibody WB image

Western blot: 50 µg of sample under reducing conditions. Rat lung, Rat thymus, Mouse lung, Mouse thymus and NIH/3T3 whole cell lysates stained with ARG42837 anti-RPS6KA3 / RSK2 antibody at 0.5 µg/ml dilution, overnight at 4°C.