

ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes p70 S6 Kinase phospho (Thr389)
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Specificity	The antibody detects endogenous levels of p70 S6 Kinase only when phosphorylated at Thr389 and it also detects p85 S6 kinase when phosphorylated at the analogous site Thr412.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	p70 S6 Kinase
Species	Human
Immunogen	Phosphospecific peptide around Thr389 of Human p70 S6 Kinase beta 1. (G-F-Tp-Y-V) (P23443-2)
Conjugation	Un-conjugated
Alternate Names	p70 S6 kinase alpha; p70(S6K)-alpha; p70-alpha; p70 S6KA; S6K; STK14A; S6K1; p70-S6K 1; Ribosomal protein S6 kinase I; 70 kDa ribosomal protein S6 kinase 1; S6K-beta-1; P70S6K1; PS6K; p70 ribosomal S6 kinase alpha; p70-S6K; EC 2.7.11.1; Serine/threonine-protein kinase 14A; p70 S6K-alpha; Ribosomal protein S6 kinase beta-1

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:200 - 1:1000
	IHC-P	1:100 - 1:300
	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.	

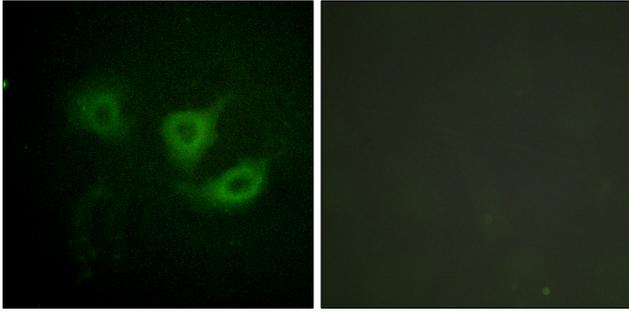
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA

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. 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.

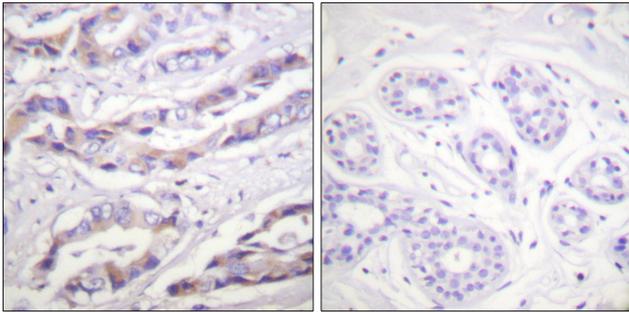
Bioinformation

Gene Symbol	RPS6KB1
Gene Full Name	ribosomal protein S6 kinase, 70kDa, polypeptide 1
Background	This gene encodes a member of the ribosomal S6 kinase family of serine/threonine kinases. The encoded protein responds to mTOR (mammalian target of rapamycin) signaling to promote protein synthesis, cell growth, and cell proliferation. Activity of this gene has been associated with human cancer. Alternatively spliced transcript variants have been observed. The use of alternative translation start sites results in isoforms with longer or shorter N-termini which may differ in their subcellular localizations. There are two pseudogenes for this gene on chromosome 17. [provided by RefSeq, Jan 2013]
Function	Serine/threonine-protein kinase that acts downstream of mTOR signaling in response to growth factors and nutrients to promote cell proliferation, cell growth and cell cycle progression. Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex. Upon mitogenic stimulation, phosphorylation by the mammalian target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation. The active form then phosphorylates and activates several substrates in the pre-initiation complex, including the EIF2B complex and the cap-binding complex component EIF4B. Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis. Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR. In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2. Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling. Mediates cell survival by phosphorylating the pro-apoptotic protein BAD and suppressing its pro-apoptotic function. Phosphorylates mitochondrial URI1 leading to dissociation of a URI1-PPP1CC complex. The free mitochondrial PPP1CC can then dephosphorylate RPS6KB1 at Thr-412, which is proposed to be a negative feedback mechanism for the RPS6KB1 anti-apoptotic function. Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1. In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B. May be involved in cytoskeletal rearrangement through binding to neurabin. Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR. [UniProt]
Calculated Mw	59 kDa
PTM	Phosphorylation at Thr-412 is regulated by mTORC1. The phosphorylation at this site is maintained by an agonist-dependent autophosphorylation mechanism (By similarity). Activated by phosphorylation at Thr-252 by PDPK1. Dephosphorylation by PPP1CC at Thr-412 in mitochondrion. [UniProt]
Cellular Localization	Cell junction, synapse, synaptosome. Mitochondrion outer membrane. Mitochondrion. Note=Colocalizes with URI1 at mitochondrion. Isoform Alpha I: Nucleus. Cytoplasm. Isoform Alpha II: Cytoplasm. [UniProt]



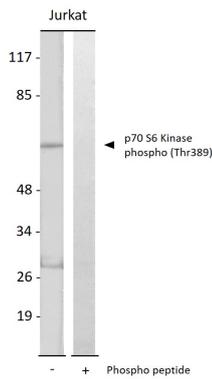
ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody ICC/IF image

Immunofluorescence: HUVEC cells stained with ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody. The picture on the right is blocked with the phospho peptide.



ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast carcinoma stained with ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody. The picture on the right is blocked with the phospho peptide.



ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody WB image

Western blot: Jurkat cells treated with Insulin 0.01U/ml for 15 min and stained with ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody. The lane on the right is blocked with the phospho peptide.



ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody WB image

Western blot: Human keratinocytes stained with ARG66449 anti-p70 S6 Kinase phospho (Thr389) antibody.

From Jia-Wei Shen et al. *Int J Mol Sci* (2022), [doi: 10.3390/ijms232314623](https://doi.org/10.3390/ijms232314623), Fig. 9.