

p70 S6 Kinase (Phospho-Thr229) Antibody

Catalog No: #12021

Package Size: #12021-1 50ul #12021-2 100ul

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Description

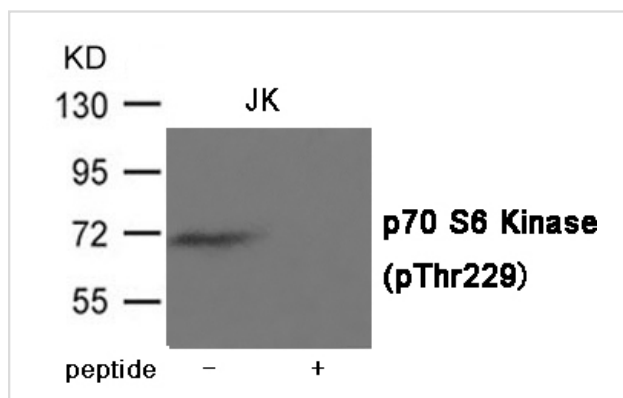
Product Name	p70 S6 Kinase (Phospho-Thr229) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Isotype	IgG
Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.
Applications	WB
Species Reactivity	Human;Mouse;Rat
Specificity	The antibody detects endogenous level of p70 S6 Kinase only when phosphorylated at Threonine 229.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of Threonine 229 (N-H-Q(p)-G-H) derived from Human p70 S6 Kinase.
Conjugates	Unconjugated
Target Name	p70 S6 Kinase
Modification	Phospho
Other Names	S6K, PS6K, S6K1, STK14A, p70-S6K
Accession No.	Swiss-Prot#: P23443; NCBI Gene#: 6198; NCBI Protein#: XP_005257622.1
SDS-PAGE MW	70kd
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C/1 year

Application Details

Predicted MW: 70kd

Western blotting: 1:500~1:1000

Images



Western blot analysis of extracts from JK cells using p70 S6 Kinase (Phospho-Thr229) Antibody #12021. The lane on the right is treated with the antigen-specific peptide.

Background

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 preinitiation 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.

Published Papers

el at., Tuberous Sclerosis Complex Inactivation Disrupts Melanogenesis via mTORC1 Activation. In J Clin Invest on 2017 Jan 3 by Juxiang Cao, Magdalena E Tyburczy, et al.. PMID:27918305, , (2017)

[PMID:27918305](#)

el at., GAS 6-expressing and self-sustaining cancer cells in 3D spheroids activate the PDK-RSK-mTOR pathway for survival and drug resistance. In Mol Oncol on 2017 Oct by Christine Baumann, Axel Ullrich, et al.. PMID: 28675785, , (2017)

[PMID:28675785](#)

Baumann Christine;Torka Robert;Ullrich Axel el at., GAS6-expressing and self-sustaining cancer cells in 3D spheroids activate the PDK-RSK-mTOR pathway for survival and drug resistance, , (2017)

[PMID:28675785](#)

Note: This product is for in vitro research use only and is not intended for use in humans or animals.