

p70 S6 Kinase (12D4) Rabbit Monoclonal Antibody
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Catalog # AP93661**Specification**

p70 S6 Kinase (12D4) Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, FC, ICC, IP
Primary Accession	P23443
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Calculated MW	59140

p70 S6 Kinase (12D4) Rabbit Monoclonal Antibody - Additional Information**Gene ID** 6198**Other Names**

Ribosomal protein S6 kinase beta-1, S6K-beta-1, S6K1, 2.7.11.1, 70 kDa ribosomal protein S6 kinase 1, P70S6K1, p70-S6K 1, Ribosomal protein S6 kinase I, Serine/threonine-protein kinase 14A, p70 ribosomal S6 kinase alpha, p70 S6 kinase alpha, p70 S6K-alpha, p70 S6KA, RPS6KB1, STK14A

Dilution

WB~~1:1000
IHC~~1:100~500
IF~~1:50~200
FC~~1:10~50
ICC~~N/A
IP~~N/A

Storage Conditions

-20°C

p70 S6 Kinase (12D4) Rabbit Monoclonal Antibody - Protein Information**Name** RPS6KB1**Synonyms** STK14A**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 (PubMed: 11500364, PubMed: 12801526, PubMed: 14673156, PubMed: 15071500, PubMed: 15341740, PubMed: 16286006, PubMed: 17052453),

PubMed:17053147, PubMed:17936702, PubMed:18952604, PubMed:19085255, PubMed:19720745, PubMed:19935711, PubMed:19995915, PubMed:22017876, PubMed:23429703, PubMed:28178239). Regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD (PubMed:11500364, PubMed:12801526, PubMed:14673156, PubMed:15071500, PubMed:15341740, PubMed:16286006, PubMed:17052453, PubMed:17053147, PubMed:17936702, PubMed:18952604, PubMed:19085255, PubMed:19720745, PubMed:19935711, PubMed:19995915, PubMed:22017876, PubMed:23429703, PubMed:28178239). Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex (PubMed:16286006). Upon mitogenic stimulation, phosphorylation by the mechanistic target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation (PubMed:16286006). 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 (PubMed:16286006). Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis (PubMed:17053147). Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR (PubMed:15341740). In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K), which leads to its inhibition and thus activation of EEF2 (PubMed:11500364). Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating MAPKAP1/SIN1, MTOR and RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling (PubMed:15899889, PubMed:19720745, PubMed:19935711, PubMed:19995915). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed:22017876). Mediates cell survival by phosphorylating the pro-apoptotic protein BAD and suppressing its pro-apoptotic function (By similarity). Phosphorylates mitochondrial URI1 leading to dissociation of a URI1-PPP1CC complex (PubMed:17936702). 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 (PubMed:17936702). Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1 (PubMed:18952604). In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B (PubMed:17052453). May be involved in cytoskeletal rearrangement through binding to neurabin (By similarity). Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (PubMed:23429703). Following activation by mTORC1, phosphorylates EPRS and thereby plays a key role in fatty acid uptake by adipocytes and also most probably in interferon-gamma-induced translation inhibition (PubMed:28178239).

Cellular Location

Synapse, synaptosome. Mitochondrion outer membrane. Mitochondrion. Note=Colocalizes with URI1 at mitochondrion [Isoform Alpha II]: Cytoplasm.

Tissue Location

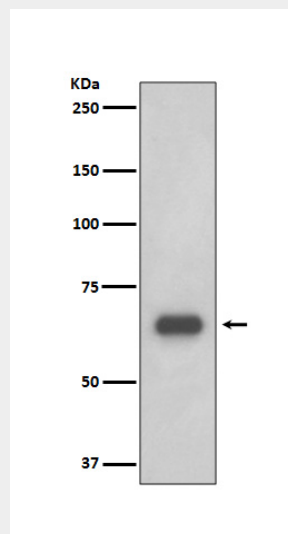
Widely expressed..

p70 S6 Kinase (12D4) Rabbit Monoclonal 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 Cytometry](#)
- [Cell Culture](#)

p70 S6 Kinase (12D4) Rabbit Monoclonal Antibody - Images



Western blot analysis of p70 S6 Kinase expression in 293T cell lysate.