

**Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody**  
Catalog # ABO15308**Specification****Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC, IF, ICC, FC   |
| Primary Accession | <a href="#">P23443</a> |
| Host              | Rabbit                 |
| Isotype           | IgG                    |
| Reactivity        | Rat, Human, Mouse      |
| Clonality         | Monoclonal             |
| Format            | Liquid                 |

**Description**

Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

**Anti-P70 S6 Kinase alpha 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

**Calculated MW**

59 kDa KDa

**Application Details**

WB 1:500-1:1000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>FC 1:200

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human P70 S6 Kinase alpha

**Purification**

Affinity-chromatography

**Storage**

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

**Anti-P70 S6 Kinase alpha 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](http://www.uniprot.org/citations/11500364), PubMed: [12801526](http://www.uniprot.org/citations/12801526), PubMed: [14673156](http://www.uniprot.org/citations/14673156), PubMed: [15071500](http://www.uniprot.org/citations/15071500), PubMed: [15341740](http://www.uniprot.org/citations/15341740), PubMed: [16286006](http://www.uniprot.org/citations/16286006), PubMed: [17052453](http://www.uniprot.org/citations/17052453), PubMed: [17053147](http://www.uniprot.org/citations/17053147), PubMed: [17936702](http://www.uniprot.org/citations/17936702), PubMed: [18952604](http://www.uniprot.org/citations/18952604), PubMed: [19085255](http://www.uniprot.org/citations/19085255), PubMed: [19720745](http://www.uniprot.org/citations/19720745), PubMed: [19935711](http://www.uniprot.org/citations/19935711), PubMed: [19995915](http://www.uniprot.org/citations/19995915), PubMed: [22017876](http://www.uniprot.org/citations/22017876), PubMed: [23429703](http://www.uniprot.org/citations/23429703), PubMed: [28178239](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11500364), PubMed: [12801526](http://www.uniprot.org/citations/12801526), PubMed: [14673156](http://www.uniprot.org/citations/14673156), PubMed: [15071500](http://www.uniprot.org/citations/15071500), PubMed: [15341740](http://www.uniprot.org/citations/15341740), PubMed: [16286006](http://www.uniprot.org/citations/16286006), PubMed: [17052453](http://www.uniprot.org/citations/17052453), PubMed: [17053147](http://www.uniprot.org/citations/17053147), PubMed: [17936702](http://www.uniprot.org/citations/17936702), PubMed: [18952604](http://www.uniprot.org/citations/18952604), PubMed: [19085255](http://www.uniprot.org/citations/19085255), PubMed: [19720745](http://www.uniprot.org/citations/19720745), PubMed: [19935711](http://www.uniprot.org/citations/19935711), PubMed: [19995915](http://www.uniprot.org/citations/19995915), PubMed: [22017876](http://www.uniprot.org/citations/22017876), PubMed: [23429703](http://www.uniprot.org/citations/23429703), PubMed: [28178239](http://www.uniprot.org/citations/28178239)). Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex (PubMed: [16286006](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16286006)). Also controls translation initiation by phosphorylating a negative regulator of EIF4A, PDCD4, targeting it for ubiquitination and subsequent proteolysis (PubMed: [17053147](http://www.uniprot.org/citations/17053147)). Promotes initiation of the pioneer round of protein synthesis by phosphorylating POLDIP3/SKAR (PubMed: [15341740](http://www.uniprot.org/citations/15341740)). In response to IGF1, activates translation elongation by phosphorylating EEF2 kinase (EEF2K),

which leads to its inhibition and thus activation of EEF2 (PubMed:<a href="http://www.uniprot.org/citations/11500364" target="\_blank">11500364</a>). Also plays a role in feedback regulation of mTORC2 by mTORC1 by phosphorylating RICTOR, resulting in the inhibition of mTORC2 and AKT1 signaling (PubMed:<a href="http://www.uniprot.org/citations/19720745" target="\_blank">19720745</a>, PubMed:<a href="http://www.uniprot.org/citations/19935711" target="\_blank">19935711</a>, PubMed:<a href="http://www.uniprot.org/citations/19995915" target="\_blank">19995915</a>). Also involved in feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR (PubMed:<a href="http://www.uniprot.org/citations/22017876" target="\_blank">22017876</a>). 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:<a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>). 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:<a href="http://www.uniprot.org/citations/17936702" target="\_blank">17936702</a>). Mediates TNF-alpha-induced insulin resistance by phosphorylating IRS1 at multiple serine residues, resulting in accelerated degradation of IRS1 (PubMed:<a href="http://www.uniprot.org/citations/18952604" target="\_blank">18952604</a>). In cells lacking functional TSC1-2 complex, constitutively phosphorylates and inhibits GSK3B (PubMed:<a href="http://www.uniprot.org/citations/17052453" target="\_blank">17052453</a>). May be involved in cytoskeletal rearrangement through binding to neurabin (By similarity). Phosphorylates and activates the pyrimidine biosynthesis enzyme CAD, downstream of MTOR (PubMed:<a href="http://www.uniprot.org/citations/23429703" target="\_blank">23429703</a>). 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:<a href="http://www.uniprot.org/citations/28178239" target="\_blank">28178239</a>).

#### Cellular Location

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

#### Tissue Location

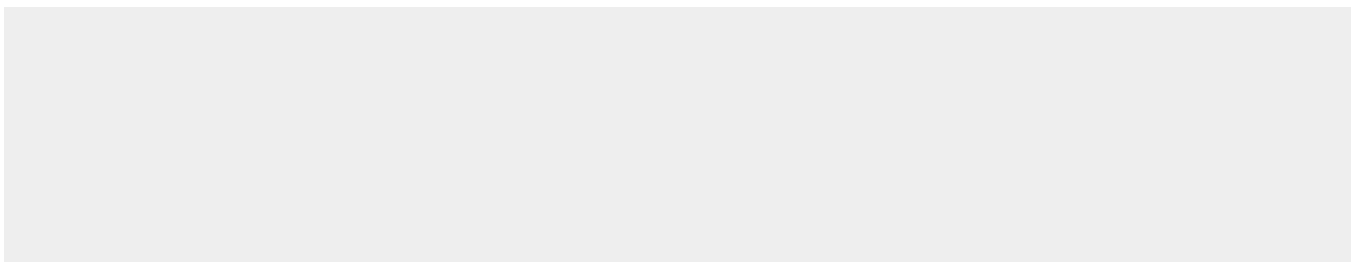
Widely expressed..

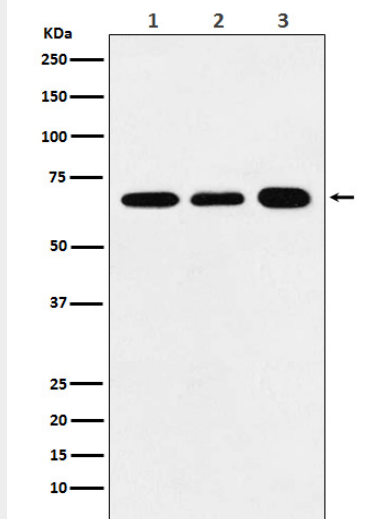
### Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody - Protocols

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](#)

### Anti-P70 S6 Kinase alpha Rabbit Monoclonal Antibody - Images





Western blot analysis of P70 S6 Kinase alpha expression in (1) HeLa cell lysate; (2) Raw264.7 cell lysate; (3) PC12 cell lysate.