

# Immunotag™ Phospho-p70 S6 Kinase (Thr389/412) Antibody

| Antibody Specification |                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalog No.            | ITA0999                                                                                                                                                            |
| Product Description    | Immunotag™ Phospho-p70 S6 Kinase (Thr389/412) Antibody                                                                                                             |
| Size                   | 100 µg, 200 µg                                                                                                                                                     |
| Conjugation            | HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647                                      |
| IMPORTANT NOTE         | This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return. |
| Target Protein         | Phospho-p70 S6 Kinase (Thr389/412)                                                                                                                                 |
| Clonality              | Polyclonal                                                                                                                                                         |
| Storage/Stability      | -20°C/1 year                                                                                                                                                       |
| Application            | WB,IHC,IF/ICC,ELISA                                                                                                                                                |
| Recommended Dilution   | WB 1:500-1:2000 IHC 1:50-1:200 IF/ICC 1:100-1:500                                                                                                                  |
| Concentration          | 1 mg/ml                                                                                                                                                            |
| Reactive Species       | Human,Mouse,Rat                                                                                                                                                    |
| Host Species           | Rabbit                                                                                                                                                             |
| Immunogen              | A synthesized peptide derived from human p70 S6 Kinase around the phosphorylation site of Threonine 389/412                                                        |
| Specificity            | Phospho-p70 S6 Kinase (Thr389/412) Antibody detects endogenous levels of p70 S6 Kinase only when phosphorylated at Threonine 389/412                               |
| Purification           | The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.            |
| Form                   | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt        |
| Gene Name              | RPS6KB1                                                                                                                                                            |
| Accession No.          | P23443                                                                                                                                                             |

## Antibody Specification

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| Alternate Names           | 70 kDa ribosomal protein S6 kinase 1; KS6B1_HUMAN; p70 alpha; P70 beta 1; p70 ribosomal S6 kinase alpha; p70 ribosomal S6 kinase beta 1; p70 S6 kinase alpha; P70 S6 Kinase; p70 S6 kinase, alpha 1; p70 S6 kinase, alpha 2; p70 S6K; p70 S6K-alpha; p70 S6KA; p70(S6K) alpha; p70(S6K)-alpha; p70-alpha; p70-S6K 1; p70-S6K; P70S6K; P70S6K1; p70S6Kb; PS6K; Ribosomal protein S6 kinase 70kDa polypeptide 1; Ribosomal protein S6 kinase beta 1; Ribosomal protein S6 kinase beta-1; Ribosomal protein S6 kinase I; RPS6KB1; S6K; S6K-beta-1; S6K1; Serine/threonine kinase 14 alpha; Serine/threonine-protein kinase 14A; STK14A;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Description               | <p>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 EEK2K, 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 EEK2 kinase (EEK2K), which leads to its inhibition and thus activation of EEK2. 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 (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: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).</p> |
| Cell Pathway/<br>Category | Primary Polyclonal Antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Protein MW                | 70kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Usage                     | For Research Use Only! Not for diagnostic or therapeutic procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |