


Product datasheet

Anti-S6K1 (phospho T412) antibody ab78413

[1 References](#) [1 Image](#)

Overview

Product name	Anti-S6K1 (phospho T412) antibody
Description	Rabbit polyclonal to S6K1 (phospho T412)
Host species	Rabbit
Specificity	ab78413 recognizes human S6K phosphorylated on Thr 412 and the human splice variant of S6K phosphorylated on Thr 389.
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat, Rabbit, Chicken, Cow, Pig 
Immunogen	Synthetic phosphopeptide: NQVFLGFT ^P YVAP conjugated to KLH, corresponding to amino acids 405-416 of Human S6K Run BLAST with Run BLAST with
Positive control	Serum-treated 3T3 cell lysate.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.035% Sodium Azide Constituents: 30% Glycerol, 0.105M Sodium chloride, 0.07M Tris glycine, pH 7.4
Purity	Protein A purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab78413** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 0.2 - 0.5 µg/ml. Detects a band of approximately 70 kDa (predicted molecular weight: 59 kDa).

Target

Function

Acts to integrate nutrient and growth factor signals in regulation of protein synthesis, cell proliferation, cell growth, cell cycle progression and cell survival. Downstream effector of the mTOR signaling pathway. Phosphorylates specifically ribosomal protein S6 in response to insulin or several classes of mitogens. During translation initiation, the inactive form associates with the eIF-3 complex under conditions of nutrient depletion. Mitogenic stimulation leads to phosphorylation and dissociation from the eIF-3 complex and the free activated form can phosphorylate other translational targets including EIF4B. Promotes protein synthesis by phosphorylating PDCD4 at 'Ser-67' and targeting it for degradation. Phosphorylates RICTOR leading to regulation of mammalian target of rapamycin complex 2 (mTORC2) signaling; probably phosphorylates RICTOR at 'Thr-1135'. Phosphorylates IRS1 at multiple serine residues coupled with insulin resistance; probably phosphorylates IRS1 at 'Ser-270'. Required for TNF-alpha induced IRS-1 degradation. Phosphorylates EEF2K in response to IGF1 and inhibits EEF2K activity. Phosphorylates BAD at 'Ser-99' in response to IGF1 leading to BAD inactivation and inhibition of BAD-induced apoptosis. Phosphorylates mitochondrial RMP leading to dissociation of a RMP:PPP1CC complex; probably phosphorylates RMP at 'Ser-99'. The free mitochondrial PPP1CC can dephosphorylate RPS6KB1 at Thr-412 which is proposed to be a negative feed back mechanism for the RPS6KB1 antiapoptotic function. Phosphorylates GSK3B at 'Ser-9' under conditions leading to loss of the TSC1-TSC2 complex. Phosphorylates POLDIP3.

Tissue specificity

Widely expressed.

Sequence similarities

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. S6 kinase subfamily.

Contains 1 AGC-kinase C-terminal domain.

Contains 1 protein kinase domain.

Domain

The autoinhibitory domain is believed to block phosphorylation within the AGC-kinase C-terminal domain and the activation loop.

The TOS (TOR signaling) motif is essential for activation by mTORC1.

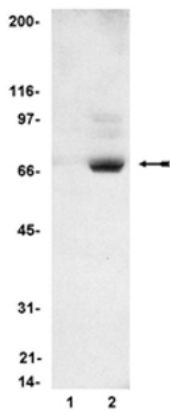
Post-translational modifications

Phosphorylation at Thr-412 is regulated by mTORC1. The phosphorylation at this site is maintained by an agonist-dependent autophosphorylation mechanism.

Cellular localization

Cytoplasm; Nucleus. Cytoplasm and Cell junction > synapse > synaptosome. Mitochondrion outer membrane.

Images



Western blot - Anti-S6K1 (phospho T412) antibody (ab78413)

All lanes : Anti-S6K1 (phospho T412) antibody (ab78413) at 0.2 µg/ml

Lane 1 : Serum starved 3T3 cell lysate

Lane 2 : Serum treated 3T3 cell lysate

Secondary

All lanes : Goat anti-rabbit HRP conjugate at 1/5000 dilution

Predicted band size: 59 kDa

Observed band size: 70 kDa

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