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p70 S6K, Active recombinant protein

p70, Ribosomal protein S6 kinase beta-1
Catalog # PBV11301r

Specification

p70 S6K, Active recombinant protein - Product info

Primary Accession	P23443
Concentration	0.1
Calculated MW	76.0 kDa KDa

p70 S6K, Active recombinant protein - Additional Info

Gene ID	6198
Gene Symbol	PS6K

Other Names
p70, Ribosomal protein S6 kinase beta-1, Serine/threonine-protein kinase 14A

Source	Baculovirus (Sf9 insect cells)
Assay&Purity	SDS-PAGE; ≥90%
Assay2&Purity2	HPLC;
Recombinant	Yes

Format
Liquid

Storage
-80°C; Recombinant protein in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).

p70 S6K, Active recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

p70 S6K, Active recombinant protein - Images

p70 S6K, Active recombinant protein - Background

Activation of cell growth leads to the multiple phosphorylation of 40S ribosomal protein S6. The kinase responsible for controlling this event is termed p70S6K (1). Northern blot analysis shows p70S6K to be ubiquitously expressed in human adult tissues. p70S6K is activated by serum stimulation, and the serum-induced activation is inhibited by wortmannin and rapamycin. p70S6k

activity undergoes changes in the cell cycle and increases 20-fold in G1 cells released from G0 (2). The kinase is reactivated 10-fold when cells released from a nocodazole-induced metaphase block enter G1 of the next cell cycle. The immunosuppressive agent rapamycin induces inactivation of p70s6k with no effect on other mitogen-activated kinases (3). The principal target of rapamycin-induced p70s6k inactivation is T389 site on p70S6K, which is located in an unusual hydrophobic sequence outside the catalytic domain. Mutation of T389 to alanine ablates kinase activity, whereas mutation to glutamic acid confers constitutive kinase activity and rapamycin resistance. p70S6K activation by growth factor requires phosphorylation by various inputs on multiple sites (4). p70S6K activation requires sequential phosphorylations at proline-directed residues in the putative autoinhibitory pseudosubstrate domain, as well as threonine 389. Threonine 229, a site in the catalytic loop is phosphorylated by phosphoinositide-dependent kinase 1 (PDK-1). Activation of p70S6K requires a phosphoinositide 3-kinase (PI3-K)-dependent signal(s).

p70 S6K, Active recombinant protein - References

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