

S6K1/RPS6KB1 Protein, Human (sf9, GST)

Cat. No.:	HY-P76588
Synonyms:	Ribosomal protein S6 kinase beta-1; S6K1; P70S6K1; p70 S6KA; RPS6KB1; STK14A
Species:	Human
Source:	Sf9 insect cells
Accession:	P23443 (M1-L525)
Gene ID:	6198
Molecular Weight:	Approximately 96 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol, 1 mM GSH. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

S6K1/RPS6KB1, a serine/threonine-protein kinase, functions downstream of mTOR signaling in response to growth factors and nutrients, orchestrating cellular processes crucial for proliferation, cell growth, and cell cycle progression. Through its phosphorylation of EIF4B, RPS6, and EEF2K, it regulates protein synthesis, contributing to cell survival by suppressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex, and upon mitogenic stimulation, phosphorylation by mTORC1 leads to dissociation and activation. S6K1 also plays a pivotal role in translation initiation by phosphorylating substrates in the pre-initiation complex. Furthermore, it controls translation elongation by phosphorylating EEF2 kinase in response to IGF1. Additionally, S6K1 is involved in feedback regulation of mTORC2 and mTORC1, mediating cell survival, and modulating insulin resistance. Notably, it participates in the regulation of fatty acid uptake and interferon-gamma-induced translation inhibition through its phosphorylation of EPRS. These multifaceted roles highlight the significance of S6K1 in coordinating diverse cellular responses to environmental cues.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA