

RSK1 Protein, Human (Sf9, His)

Cat. No.:	HY-P701772
Synonyms:	RPS6KA1; Ribosomal protein S6 kinase alpha-1; S6K-alpha-1; 90 kDa ribosomal protein S6 kinase 1; p90-RSK 1; p90RSK1; p90S6K; MAP kinase-activated protein kinase 1a; MAPK-activated protein kinase 1a; MAPKAP kinase 1a; MAPKAPK-1a; Ribosomal S6 kinase 1; RSK-1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q15418 (Q33-T353)
Gene ID:	6195
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>RSK1, a serine/threonine-protein kinase, functions downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and plays a crucial role in mediating mitogenic and stress-induced cellular responses. RSK1 orchestrates the activation of transcription factors such as CREB1, ETV1/ER81, and NR4A1/NUR77, contributing to cellular proliferation, survival, and differentiation. Through its intricate involvement in the mTOR signaling pathway, RSK1 regulates translation by phosphorylating RPS6 and EIF4B, facilitating the assembly of pre-initiation complexes and enhancing cap-dependent translation. Furthermore, RSK1 exerts its influence on various cellular processes, including inhibiting the pro-apoptotic functions of BAD and DAPK1, promoting cell survival, and regulating cell cycle progression by phosphorylating CDKN1B. In response to insulin, RSK1 indirectly modulates gene transcription by phosphorylating GSK3B, and in the mTOR nutrient-sensing pathway, it phosphorylates TSC2 and RPTOR, influencing mTORC1 activity. Additionally, RSK1 participates in the feedback regulation of mTORC1 and mTORC2 by phosphorylating DEPTOR. Notably, during microbial infections, RSK1 is implicated in promoting the late transcription and translation of viral lytic genes in Kaposi's sarcoma-associated herpesvirus/HHV-8 infection when constitutively activated.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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