

Recombinant Human RPS6KA1 Protein (Q33-T353), His tagged

Cat. No. RPS6KA1-1149H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human 8His-TEV-RSK1(Q33-T353) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	Q33-T353
Description	Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro-apoptotic function of BAD and DAPK1. In fibroblast, is required for EGF-stimulated phosphorylation of CREB1, which results in the subsequent transcriptional activation of several immediate-early genes. In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP. Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity. Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the pre-initiation complex. In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent

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translation. Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potently inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin-sensitive signaling independently of the PI3K/AKT pathway. Mediates cell survival by phosphorylating the pro-apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function. Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl₄). Mediates induction of hepatocyte proliferation by TGFA through phosphorylation of CEBPB. Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression. Phosphorylates EPHA2 at 'Ser-897', the RPS6KA-EPHA2 signaling pathway controls cell migration.

Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	RPS6KA1 ribosomal protein S6 kinase, 90kDa, polypeptide 1 [Homo sapiens (human)]
Official Symbol	RPS6KA1
Synonyms	RPS6KA1; ribosomal protein S6 kinase, 90kDa, polypeptide 1; ribosomal protein S6 kinase, 90kD, polypeptide 1; ribosomal protein S6 kinase alpha-1; HU 1; RSK; RSK1; RSK-1; p90S6K; p90RSK1; p90-RSK 1; MAPKAPK-1a; S6K-alpha 1; S6K-alpha-1; MAPKAP kinase 1a; ribosomal S6 kinase 1; MAPK-activated protein kinase 1a; ribosomal protein S6 kinase alpha 1; 90 kDa ribosomal protein S6 kinase 1; MAP kinase-activated protein kinase 1a; dJ590P13.1 (ribosomal protein S6 kinase, 90kD, polypeptide 1); HU-1; MAPKAPK1A;
Gene ID	6195
mRNA Refseq	NM_001006665
Protein Refseq	NP_001006666
MIM	601684
UniProt ID	Q15418

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