Recombinant Human RPS6KA1 Protein (Q33-T353), Tag Free

Cat. No. RPS6KA1-1148H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human 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 translation. Is involved in the mTOR nutrient-sensing pathway by directly

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	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 prolifration 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

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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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