

Active Recombinant Full Length Human RPS6KA2 Protein, N-His-tagged

Cat. No. RPS6KA2-168HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	N-terminal 6His-tagged recombinant full-length, human RSK3, expressed in Sf21 insect cells. Purified using Ni ²⁺ /NTA agarose. Activated using MAP Kinase 2 and PDK1 and repurified using glutathione-agarose, heparin Sepharose and Ni ²⁺ /NTA-agarose.
Species	Human
Source	Sf21
ProteinLength	Full Length
Description	Serine/threonine protein kinases RSKs contain three isoforms RSK1, RSK2 and RSK3 and act at the distal end of MAPK Signaling pathway. They are directly phosphorylated and activated by ERK1/2 in response to many growth factors, peptide hormones and neurotransmitters. RSKs have been shown to regulate apoptosis through phosphorylation and inactivation of the pro-apoptotic protein BAD, and cell cycle since the kinase Myt1 is a RSK target. RSK3 (Ribosomal protein S6 kinase 3, SK6-alpha, MAPKAPK1C) is especially interesting, because it features an additional nuclear targeting signal near its N-terminus, and can phosphorylate a variety of transcription factors (CREB, TCF/Lef, Myc, the estrogen receptor, and the Fos subunit of AP-1).
Form	1.688mg/ml of enzyme in 50mM Tris/HCl pH7.5, 0.1mM EGTA, 150mM NaCl, 0.03%

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	Brij-35, 0.2mM PMSF, 1mM benzamidine, 0.1% 2-mercaptoethanol, 270mM sucrose. Frozen solution.
Bio-activity	243U/mg, where one unit of RSK3, active activity is defined as 1nmol phosphate incorporated into 30μM (KKKNRTLSVA) per minute at 30 centigrade with a final ATP concentration of 100μM.
Molecular Mass	87 kDa
AA Sequence	1 MSYYHHHHHH DYDIPTTENL YFQGAMDPEF MDLSMKKFAV RRRFFSVYLRR KSRKSSSLSS 61 RLEEEGVVKE IDISHHVKEG FEKADPSQFE LLKVLGQGSY GKVFLVRKVK GSDAGQLYAM 121 KVLKKATLKV RDRVRSKMER DILAENVNHPF IVKLHYAFQT EGKLYLILDF LRGGDLFTRL 181 SKEVMFTEED VKFYLAELAL ALDHLHSLGI IYRDLKPENI LLDEEGHIKI TDFGLSKEAI 241 DHDKRAYSFC GTIEYMAPEV VNRRGHTQSA DWWSFGVLMF EMLTGSLPFQ GKDRKETMAL 301 ILKAKLGMPQ FLSGEAQSL RALFKRNPCN RLGAGIDGVE EIKRHPFFVT IDWNTLYRKE 361 IKPPFKPAVG RPEDTFHFDP EFTARTPTDS PGVPPSANAH HLFRGFSFVA SSLIQEPSQQ 421 DLHKVPVHPI VQQLHGNNIH FTDGYEIKED IGVGSYSVCK RCVHKATDTE YAVKIIDKSK 481 RDPSEEIEIL LRYGQHPII TLKDVYDDGK FVYLVMELMR GGELLDRIIR QRYFSEREAS 541 DVLCTITKTM DYLHSQGVVH RDLKPSNILEY RDESGSPESI RVCDFGFAKQ LRAGNGLLMT 601 PCYTANFVAP EVLKRQGYDA ACDIWSLGIL LYTMLAGFTP FANGPDDTPE EILARIGSGK 661 YALSGGNWDS ISDAAKDVVS KMLHVDPHQR LTAMQVLKHP WVWNREYLSP NQLSRQDVHL 721 VKGAMAATYF ALNRTPQAPR LEPVLSSNLA QRRGMKRLTS TRL
Purity	Purified to 27% by SDSPAGE and Coomassie blue staining.
Applications	Drug Discovery & Development

Storage	1 year at -70 centigrade.
Handling Advice	Rapidly thaw the vial under cold water and immediately place on ice. Aliquot unused material into prechilled micro-centrifuge tubes and immediately snap-freeze the vials in liquid nitrogen prior to re-storage at -70 centigrade.
Use/Stability	On receipt of material store at -70 centigrade. Unopened reagent is stable for a minimum of 1 year from date of shipment when stored at recommended storage temperature. Avoid repeat freeze/thaw cycles. For maximum recovery of product, centrifuge original vial prior to removing the cap.

GENE INFORMATION

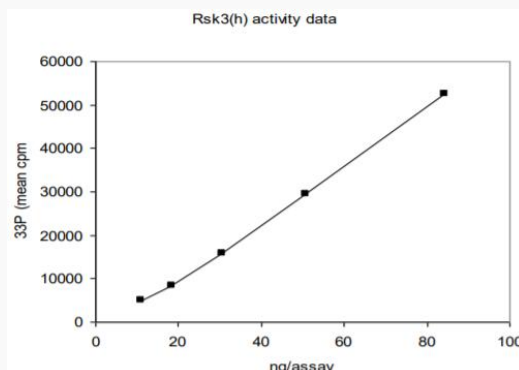
Gene Name	RPS6KA2 ribosomal protein S6 kinase A2 [Homo sapiens (human)]
Official Symbol	RPS6KA2
Synonyms	RPS6KA2; ribosomal protein S6 kinase A2; RSK; HU-2; RSK3; p90RSK2; p90-RSK3; pp90RSK3; MAPKAPK1C; S6K-alpha; S6K-alpha2
Gene ID	6196
mRNA Refseq	NM_021135.6
Protein Refseq	NP_066958.2
MIM	601685
UniProt ID	Q15349

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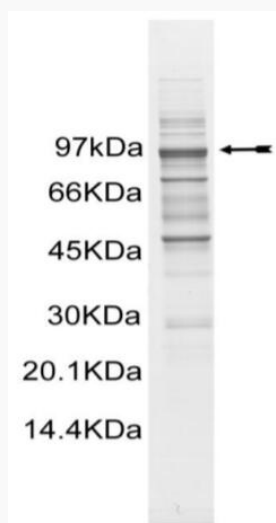
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Kinase Assay



11–84ng of this lot of enzyme phosphorylated 30 μ M (KKKNRTLSVA) in the assay.

SDS-PAGE



Purity was assessed by SDS-PAGE and Coomassie blue staining using 3 μ g of RSK3, active.

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