

Recombinant RPS6KB1 protein

Catalog No: 81409, 89409

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.2 µg/µl

Source: Human

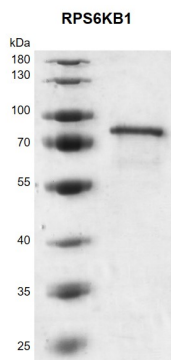
Buffer Contents: Recombinant RPS6KB1 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

Background: **RPS6KB1 (Ribosomal Protein S6 Kinase B1)** is a serine/threonine-protein kinase that acts downstream of mTOR signaling in response to growth factors and nutrients to promote cell proliferation, cell growth and cell cycle progression. RPS6KB1 regulates protein synthesis through phosphorylation of EIF4B, RPS6 and EEF2K, and contributes to cell survival by repressing the pro-apoptotic function of BAD. Under conditions of nutrient depletion, the inactive form associates with the EIF3 translation initiation complex. Upon mitogenic stimulation, phosphorylation by the mammalian target of rapamycin complex 1 (mTORC1) leads to dissociation from the EIF3 complex and activation. The active form then phosphorylates and activates several substrates in the pre-initiation complex, including the EIF2B complex and the cap-binding complex component EIF4B.

Protein Details: Recombinant RPS6KB1 protein was expressed in baculovirus expression system as the full length protein (accession number NP_003152.1) with a N-terminal FLAG tag. The molecular weight of the protein is 60.4 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

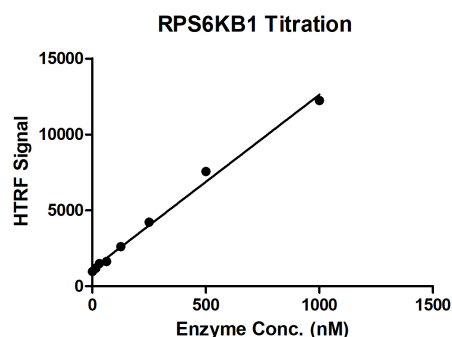


Recombinant RPS6KB1 protein

10% SDS-PAGE Coomassie staining

MW: 60.4 kDa

Purity: $\geq 95\%$



HTRF assay for RPS6KB1 activity

1 μ M STK S3 substrate was incubated with different concentrations of RPS6KB1 protein in a 10 μ l reaction system containing 1 $\times$ Enzymatic Buffer, 2 mM MgCl₂, 1 mM DTT, and 100 μ M ATP for 1 hour. The 10 μ l detection reagents containing anti-STK antibody (1:2) and SA-XL665 (1:100) diluted with 1 $\times$ Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.