

## Recombinant RPS6KA1/RSK1 protein

**Catalog No:** 81398, 81698**Expressed In:** Baculovirus**Quantity:** 20, 1000 µg**Concentration:** 0.25 µg/µl**Source:** Human

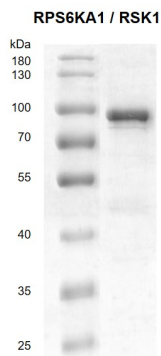
**Buffer Contents:** Recombinant RPS6KA1 / RSK1 protein is supplied in 25 mM HEPES NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

**Background:** **RPS6KA1 – (Ribosomal Protein S6 Kinase A1)** is a 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. This protein 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. Diseases associated with RPS6KA1 include Coffin-Lowry Syndrome and Tuberous Sclerosis.

**Protein Details:** Recombinant RPS6KA1 / RSK1 protein was expressed in baculovirus expression system as the full length protein (accession number NP\_002944.2) with a N-terminal FLAG tag. The molecular weight of the protein is 84 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.

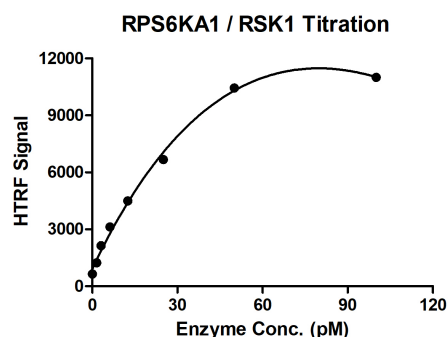


### Recombinant RPS6KA1 / RSK1 protein gel

10% SDS-PAGE Coomassie staining

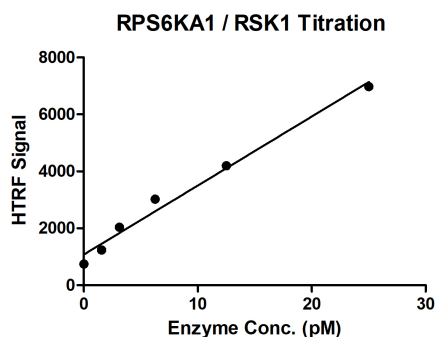
MW: 84 kDa

Purity:  $\geq 90\%$



### HTRF assay for RPS6KA1 / RSK1 activity

1  $\mu$ M STK S1 substrate was incubated with different concentrations of RPS6KA1 / RSK1 protein in 10  $\mu$ l reaction system containing 1 $\times$ Enzymatic Buffer, 5 mM MgCl<sub>2</sub>, 1 mM DTT, and 100  $\mu$ M ATP for 1 hour. The detection reagents were added and incubated with the reactions for 30 min. All operations and reactions were performed at room temperature, and HTRF assay was used to detect the enzymatic activity.



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