

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human p70 S6 Kinase β in direct ELISAs and Western blots. In direct ELISAs, less than 3% cross-reactivity with recombinant human p70 S6 Kinase is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human p70 S6 Kinase β Ala2-Ser410 Accession # Q9UBS0
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

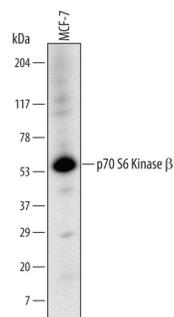
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 μ g/mL	See Below
Immunocytochemistry	5-15 μ g/mL	See Below

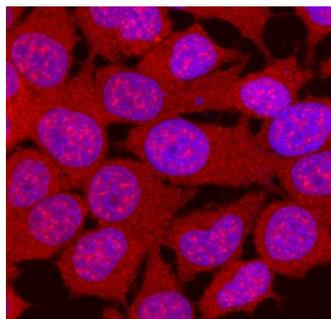
DATA

Western Blot



Detection of Human p70 S6 Kinase β by Western Blot.
Western blot shows lysates of MCF-7 human breast cancer cell line. PVDF Membrane was probed with 1 μ g/mL of Goat Anti-Human p70 S6 Kinase β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2987) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for p70 S6 Kinase β at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

Immunocytochemistry



p70 S6 Kinase β in MCF-7 Human Cell Line. p70 S6 Kinase β was detected in immersion fixed MCF-7 human breast cancer cell line using Goat Anti-Human p70 S6 Kinase β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2987) at 10 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

P70S6K beta (p70 ribosomal S6 kinase beta-2; also RPS6KB2, S6K β , S6K β 2, S6K2 and STK14B) is a monomeric, 54 kDa member of the AGC family of Ser/Thr kinases. It is widely expressed, and found predominately in the nucleus. Although it was initially reported to phosphorylate the ribosomal S6 protein, p70S6K β /S6K β 2 is now known to also phosphorylate RafB (cell survival), hnRNP (cell proliferation), p300/CBP (transcription) and CDC42 (cytoskeleton stability). Human p70S6K β /S6K β 2 is 482 amino acids in length. It contains a protein kinase domain (aa 67-328), a C-terminal regulatory region (aa 329-399) that contains an NLS (aa 384-389), and a Pro-rich segment (aa 411-482) that likely interacts with SH3 domain-containing proteins. Phosphorylation/dephosphorylation events and sumoylation regulate p70S6K β activity. In addition to the 54 kDa form, there is a 56-60 kDa isoform that possesses a 13 aa addition at the N-terminus, plus an isoform that shows a deletion of aa 267-270. Over aa 1-410, human p70S6K β 2 shares 95% and 75% aa identity with mouse p70S6K β 2 and human p70S6K β 1, respectively.