

Product datasheet

p70S6K (pT389) ELISA Kit ab176651

SimpleStep ELISA

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Overview

Product name p70S6K (pT389) ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
MCF7 extract	6			3.3%

Inter-assay

Sample	n	Mean	SD	CV%
MCF7 extract	3			2.9%

Sample type Cell Lysate, Tissue Homogenate

Assay type Semi-quantitative

Sensitivity 1 ng/ml

Range 1 ng/ml - 100 ng/ml

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse, Human

Predicted to work with: Rat 

Product overview

Abcam's p70S6K (pT389) *in vitro* SimpleStep ELISA™ (Enzyme-Linked Immunosorbent Assay) kit is designed for the semi-quantitative measurement of p70S6K (pT389) protein in Human and mouse cells.

The SimpleStep ELISA™ employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change

from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Notes Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform Microplate

Properties

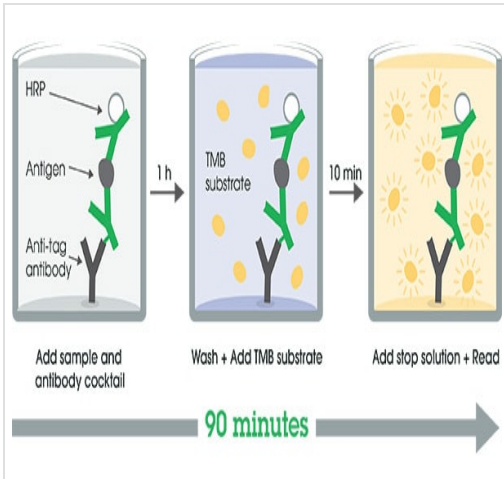
Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Wash Buffer PT	1 x 15ml
50X Cell Extraction Enhancer Solution	1 x 1ml
5X Cell Extraction Buffer PTR	1 x 10ml
Lyophilized p70S6K Control Lysate	1 vial
p70S6K (pT389) Capture Antibody	1 x 3ml
p70S6K (pT389) Detector Antibody	1 x 3ml
Plate Seal	1 unit
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Substrate	1 x 12ml

Relevance The protein p70 S6 kinase is critical for cell cycle progression and cell survival. In response to mitogen stimulation, p70 S6 kinase activation up-regulates ribosomal biosynthesis and enhances the translational capacity. The p70S6K phosphorylates the S6 protein of the 40S subunit of the ribosome. This kinase was first characterized as an insulin/mitogen-activated protein kinase, whose major known substrate is the 40 S ribosomal subunit protein S6. The p70 S6 kinase is activated by diverse stimuli through a multi-site phosphorylation such as Thr-252 and Ser-434. In Alzheimer's Disease (AD), p70 S6 kinase activation is associated with PHF-tau (hyperphosphorylated tau) accumulation. In non-neuronal cells, p70 S6 kinase have been shown to regulate actin polymerization.

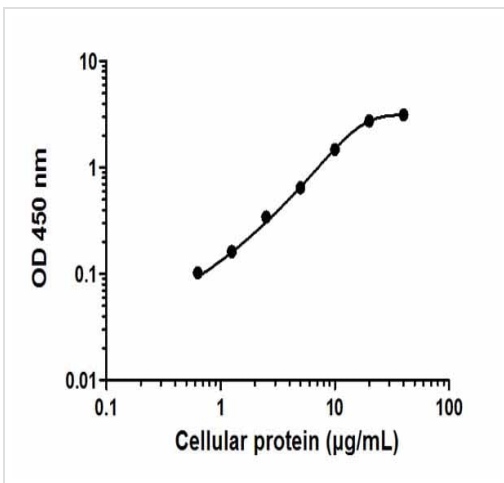
Cellular localization Cell junction › synapse › synaptosome By similarity. Mitochondrion outer membrane. Mitochondrion. Note: Colocalizes with URI1 at mitochondrion. Isoform Alpha I: Nucleus. Cytoplasm Isoform Alpha II: Cytoplasm

Images



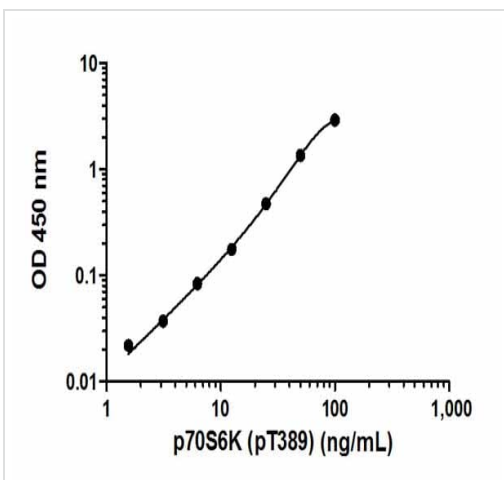
Other - p70S6K (pT389) ELISA Kit (ab176651)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



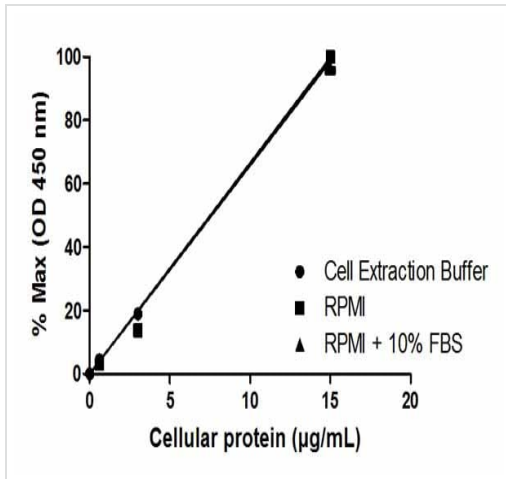
Typical cell lysate dilution series

Example of a typical p70S6K (pT389) cell lysate dilution series. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



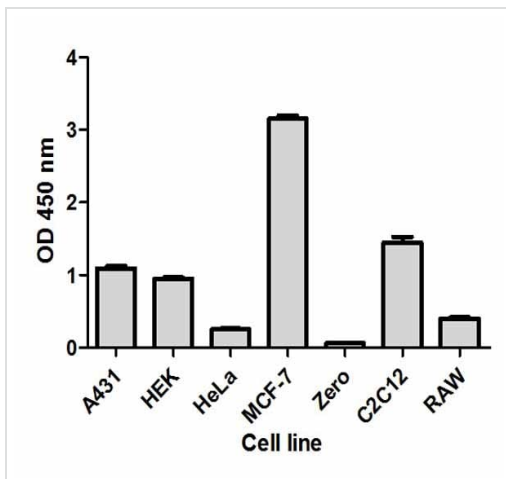
Typical recombinant protein standard curve

Example of a typical p70S6K (pT389) recombinant protein standard curve. The proportion of total protein that is phosphorylated is unknown - data is indicative only. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



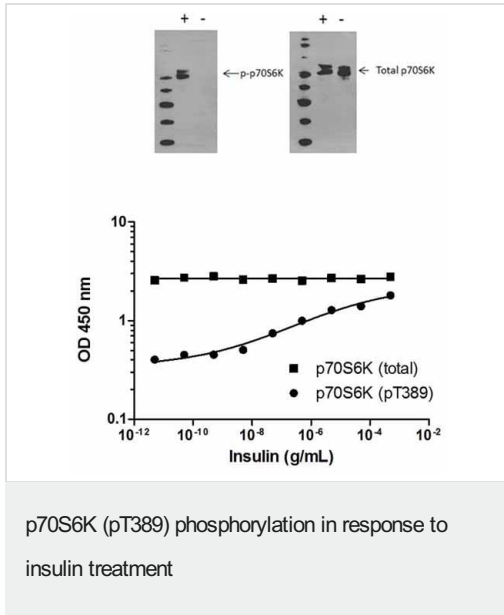
Linearity of dilution

Linearity of dilution in representative sample matrices. Cellular lysates were prepared at 3 concentrations in common media containing 1 x Cell Extraction Buffer PTR. Data from duplicate measurements of p70S6K (pT389) are normalized and plotted.



Comparison of p70S6K (pT389) expression in different cell lines

Cell line analysis for Total p70S6K from 100 µg/mL preparations of cell extracts. Data from triplicate measurements (mean +/- SD) are plotted and compared to 1X Cell Extraction Buffer PTR (zero).



Induction of p70S6K (pT389) phosphorylation in MCF-7 cells in response to insulin treatment. MCF-7 cells were cultured in 96-well tissue culture plates, serum-starved and treated (10 min) with a dose-range of insulin before cell lysis. Data from quadruplicate measurements of p70S6K (pT389) are plotted and compared against total p70S6K protein levels. Comparative p70S6K (pT389) and p70S6K (Total) data also shown by Western Blot.

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