

Datasheet for ABIN3137630

## MSK2 Protein (AA 1-773) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	MSK2 (RPS6KA4)
Protein Characteristics:	AA 1-773
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MSK2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	AliCE®
Sequence:	<p>MGDEDEDEGC AVELQITEAN LTGHEEKVSV ENFALLKVLG TGAYGKVFLV RKTGGHDAGK</p> <p>LYAMKVLRLKA ALVQRAKTQE HTRTERSVLE LVRQAPFLVT LHAFQTDAL LHLILDYVSG</p> <p>GEMFTHLYQR QYFKEAEVRV YGGEIVLALE HLHKLGIYR DLKLENVLLD SEGHIVLTDF</p> <p>GLSKEFLTEE KERTFSFCGT IEYMAPEIIR SKAGHGKAVD WWSLGILLFE LLTGASPFLL</p> <p>EGERNQAQEV SRRILKCSPP FPLRIGPVAQ DLLQRLCKD PKKRLGAGPQ GAQEVKSHPF</p> <p>FQGLDWVALA ARKIPAPFRP QIRSELDVGN FAEFTRLEP VYSPAGSPPP GDPRIFQGYG</p> <p>FVAPSILFDH NNAVMADVLQ APGAGYRPRG AAVARSAMMQ DSPFFQYQEL DLREPALGQG</p> <p>SFSVCRRRCRQ RQSGQEFQAVK ILSRRLEENT QREVAALRLC QSHPNVNLH EVLHDQLHTY</p> <p>LVLELLRGGE LLEHIRKKRL FSESEASQIL RSLVSAVSFM HEEAGVVHRD LKPENILYAD</p> <p>DTPGAPVKII DFGFARLRPQ SPAEPMQTPC FTLQYAAPEL LAQQGYDESC DLWSLGVILY</p> <p>MMLSGQVPFQ GASGQGGQSQ AAEIMCKIRE GRFSLDGEAW QGVSEEAKEL VRGLLTVDPA</p>

KRLKLEGLRS SSWLQDGSAR SSPPLRTPDV LESSGPAVRS GLNATFMAFN RGKREGFFLK  
SVENAPLAKR RKQKLRSAAA SRRGSPVPAS SGRLPASAAK GTTRRANGPL SPS

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

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### Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

## Product Details

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

## Target Details

Target: MSK2 (RPS6KA4)

Alternative Name: Rps6ka4 ([RPS6KA4 Products](#))

Background: Ribosomal protein S6 kinase alpha-4 (S6K-alpha-4) (EC 2.7.11.1) (90 kDa ribosomal protein S6 kinase 4) (Nuclear mitogen- and stress-activated protein kinase 2) (RSK-like protein kinase) (RLSK),FUNCTION: Serine/threonine-protein kinase that is required for the mitogen or stress-induced phosphorylation of the transcription factors CREB1 and ATF1 and for the regulation of the transcription factor RELA, and that contributes to gene activation by histone phosphorylation and functions in the regulation of inflammatory genes. Phosphorylates CREB1 and ATF1 in response to mitogenic or stress stimuli such as UV-C irradiation, epidermal growth factor (EGF) and anisomycin. Plays an essential role in the control of RELA transcriptional activity in response to TNF. Phosphorylates 'Ser-10' of histone H3 in response to mitogenics, stress stimuli and EGF, which results in the transcriptional activation of several immediate early genes, including proto-oncogenes c-fos/FOS and c-jun/JUN. May also phosphorylate 'Ser-28' of histone H3. Mediates the mitogen- and stress-induced phosphorylation of high mobility group protein 1 (HMG1/HMG14). In lipopolysaccharide-stimulated primary macrophages, acts downstream of the Toll-like receptor TLR4 to limit the production of pro-inflammatory cytokines. Functions probably by inducing transcription of the MAP kinase phosphatase DUSP1 and the anti-inflammatory cytokine interleukin 10 (IL10), via CREB1 and ATF1 transcription factors (By similarity). {ECO:0000250, ECO:0000269|PubMed:11909979, ECO:0000269|PubMed:16517600, ECO:0000269|PubMed:18690222}.

Molecular Weight: 85.7 kDa

UniProt: [Q9Z2B9](#)

## Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce

Application Details

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Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months