

Recombinant Mouse STK11 Protein (1-433 aa), His-Myc-tagged

Cat. No. STK11-2814M Lot. No. (See product label)

SPECIFICATION

| | |
|-------------------------|--|
| Product Overview | Recombinant Mouse STK11 Protein (1-433 aa) is produced by Baculovirus expression system. This protein is fused with a 10xHis tag at the N-terminal and a Myc tag at the C-terminal. Research Area: Cancer. Protein Description: Full Length. |
| Species | Mouse |
| Source | Insect Cells |
| ProteinLength | 1-433 aa |
| Description | Tumor suppressor serine/threonine-protein kinase that controls the activity of AMP-activated protein kinase (AMPK) family members, thereby playing a role in various processes such as cell metabolism, cell polarity, apoptosis and DNA damage response. Acts by phosphorylating the T-loop of AMPK family proteins, thus promoting their activity: phosphorylates PRKAA1, PRKAA2, BRSK1, BRSK2, MARK1, MARK2, MARK3, MARK4, NUA1, NUA2, SIK1, SIK2, SIK3 and SNRK but not MELK. Also phosphorylates non-AMPK family proteins such as STRADA, PTEN and possibly p53/TP53. Acts as a key upstream regulator of AMPK by mediating phosphorylation and activation of AMPK catalytic subunits PRKAA1 and PRKAA2 and thereby regulates processes including: inhibition of signaling pathways that promote cell growth and proliferation when energy levels are low, glucose homeostasis in liver, activation of autophagy when cells undergo nutrient deprivation, and B-cell differentiation in the germinal center in response to DNA damage. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton. Required |

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

for cortical neuron polarization by mediating phosphorylation and activation of BRSK1 and BRSK2, leading to axon initiation and specification. Involved in DNA damage response: interacts with p53/TP53 and recruited to the CDKN1A/WAF1 promoter to participate in transcription activation. Able to phosphorylate p53/TP53; the relevance of such result in vivo is however unclear and phosphorylation may be indirect and mediated by downstream STK11/LKB1 kinase NUAK1. Also acts as a mediator of p53/TP53-dependent apoptosis via interaction with p53/TP53: translocates to the mitochondrion during apoptosis and regulates p53/TP53-dependent apoptosis pathways. In vein endothelial cells, inhibits PI3K/Akt signaling activity and thus induces apoptosis in response to the oxidant peroxynitrite. Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with NUAK1, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair.

Form Tris-based buffer,50% glycerol

Molecular Mass 52.9 kDa

AA Sequence

```
MDVADPEPLGLFSEGELMSVGMDFIHRIDSTEVIYQPRRKRAKLIGKYLMDLLGE
GSYGKVKEVLDSETLCRRAVKILKKKLRIPNGEANVKKEIQLLRRLRHRNVIQLVD
VLYNEEKQKMYMVMEYCVCGMQEMLDSVPEKRFVPCQAHGYFRQLIDGLEYLHSQ
GIVHKDIKPGNLLTTNGTLKISDLGVAEALHPFAVDDTCRTSQGSPAFQPPEIANGL
DTFSGFKVDIWSAGVTLYNITTGLYPFEGDNIYKLFENIGRGDFTIPCDGPPSLDLLR
GMLEYEPAKRFSIRQIRQHSWFRKKHPLAEALVPIPPSPDTKDRWRSMTVVPYLEDL
HGRAEEEEEDLFDIEDGIIYTQDFTVPGQVLEEEVGQNGQSHSLPKAVCVNGTEPQ
LSSKVKPEGRPGTANPARKVCSSNKIRRLSAC
```

Purity > 85% as determined by SDS-PAGE.

Notes Repeated freezing and thawing is not recommended. Store working aliquots at 4

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

centigrade for up to one week.

Storage

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.

Concentration

A hardcopy of COA will be sent along with the products. Please refer to it for detailed information.

GENE INFORMATION

Gene Name

[Stk11 serine/threonine kinase 11 \[Mus musculus \]](#)

Official Symbol

[STK11](#)

Synonyms

STK11; serine/threonine kinase 11; LKB1 short isoform; Lkb1; Par-4; mLKB1; R75140; AA408040;

Gene ID

[20869](#)

mRNA Refseq

[NM_011492](#)

Protein Refseq


[NP_035622](#)

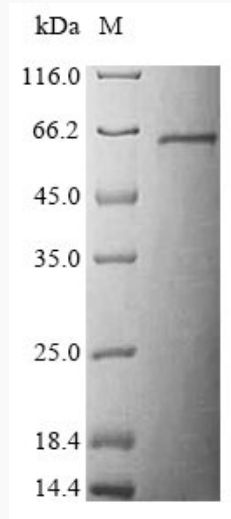
UniProt ID

[Q9WTK7](#)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA