

STK11/LKB1 recombinant protein

Recombinant STK11/LKB1 protein

CATALOG #
AAA60249

HOST
Baculovirus

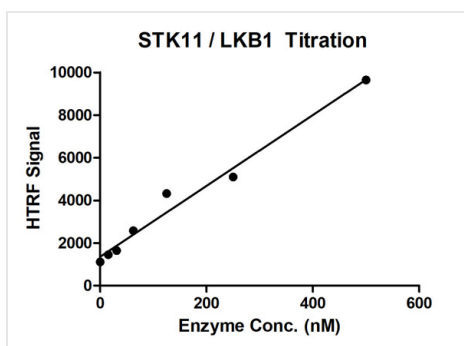
PRODUCT SYNONYMS

STK11/LKB1; Recombinant STK11/LKB1 protein; Serine/threonine kinase 11; STK11/LKB1 recombinant protein

PRODUCT SPECIFICATIONS

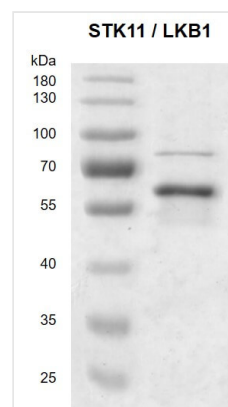
Host	Baculovirus
Form/Format	Recombinant STK11/LKB1 protein is supplied in 25mM HEPES-NaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Protein Details	Recombinant STK11/LKB1 protein was expressed in a baculovirus expression system as the full length protein (accession number NP_000446.1) with an N-terminal DYKDDDDK tag.
Notes	This product was manufactured as described in Protein Details. Where possible, We 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.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

HTRF assay for STK11 / LKB1 activity 1 uM STK S1 substrate was incubated with different concentrations of STK11 / LKB1 protein in a 10 ul reaction system containing 1xEnzymatic Buffer, 5 mM MgCl₂, 1 mM DTT, and 100uM ATP for 1 hour. Then 10 ul detection reagents containing STK antibody (1:2) and SA-XL665 (1:100) diluted with 1x Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



SDS-PAGE

Recombinant STK11 / LKB1 protein 10% SDS-PAGEwith Coomassie staining MW: 49.6 kDa
Purity: >80%

ADDITIONAL INFORMATION

Related Product Information for STK11/LKB1 recombinant protein	Background: STK11 (Serine/Threonine Kinase 11) is a tumor suppressor serine/threonine-protein kinase that controls the activity of AMP-activated protein kinase (AMPK) family members and plays a role in various processes such as cell metabolism, cell polarity, apoptosis and DNA damage response. STK11 phosphorylates the T-loop of AMPK family proteins, thus promoting their activity. STK11 phosphorylates PRKAA1, PRKAA2, BRSK1, BRSK2, MARK1, MARK2, MARK3, MARK4, NUAK1, NUAK2, SIK1, SIK2, SIK3 and SNRK but not MELK and also phosphorylates non-AMPK family proteins such as STRADA, PTEN and possibly p53/TP53. STK11 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.
Product Categories/Family for STK11/LKB1 recombinant protein	Recombinant Proteins; Kinase

NCBI AND UNIPROT INFORMATION

NCBI GI #	4507271
NCBI GeneID	6794
NCBI Accession #	NP_000446.1
NCBI GenBank Nucleotide #	NM_000455.4
UniProt Accession #	Q15831; B2RBX7; E7EW76
Molecular Weight	48,636 Da
NCBI Official Full Name	serine/threonine-protein kinase STK11
NCBI Official Synonym Full Names	serine/threonine kinase 11
NCBI Official Symbol	STK11
NCBI Official Synonym Symbols	PJS; LKB1; hLKB1
NCBI Protein Information	serine/threonine-protein kinase STK11; liver kinase B1; polarization-related protein LKB1; renal carcinoma antigen NY-REN-19; serine/threonine-protein kinase 11; serine/threonine-protein kinase LKB1
UniProt Protein Name	Serine/threonine-protein kinase STK11
UniProt Gene Name	STK11
UniProt Synonym Gene Names	LKB1; PJS; LKB1; hLKB1
UniProt Entry Name	STK11_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.