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## Datasheet for ABIN7555567 SIK1 Protein (AA 1-783) (His tag)

3 Images



#### Overview

Quantity:	1 mg
Target:	SIK1
Protein Characteristics:	AA 1-783
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SIK1 protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant SIK1 Protein expressed in mammalian cells.
Sequence:	MVIMSEFSAD PAGQGQGQQK PLRVGFYDIE RTLGKGNFAV VKLARHRVTK TQVAIKIIDK
	TRLDSSNLEK IYREVQLMKL LNHPHIIKLY QVMETKDMLY IVTEFAKNGE MFDYLTSNGH
	LSENEARKKF WQILSAVEYC HDHHIVHRDL KTENLLLDGN MDIKLADFGF GNFYKSGEPL
	STWCGSPPYA APEVFEGKEY EGPQLDIWSL GVVLYVLVCG SLPFDGPNLP TLRQRVLEGR
	FRIPFFMSQD CESLIRRMLV VDPARRITIA QIRQHRWMRA EPCLPGPACP AFSAHSYTSN
	LGDYDEQALG IMQTLGVDRQ RTVESLQNSS YNHFAAIYYL LLERLKEYRN AQCARPGPAR
	QPRPRSSDLS GLEVPQEGLS TDPFRPALLC PQPQTLVQSV LQAEMDCELQ SSLQWPLFFP
	VDASCSGVFR PRPVSPSSLL DTAISEEARQ GPGLEEEQDT QESLPSSTGR RHTLAEVSTR
	LSPLTAPCIV VSPSTTASPA EGTSSDSCLT FSASKSPAGL SGTPATQGLL GACSPVRLAS
	PFLGSQSATP VLQAQGGLGG AVLLPVSFQE GRRASDTSLT QGLKAFRQQL RKTTRTKGFL
	GLNKIKGLAR QVCQAPASRA SRGGLSPFHA PAQSPGLHGG AAGSREGWSL LEEVLEQQRL
	LQLQHHPAAA PGCSQAPQPA PAPFVIAPCD GPGAAPLPST LLTSGLPLLP PPLLQTGASP

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	VASAAQLLDT HLHIGTGPTA LPAVPPPRLA RLAPGCEPLG LLQGDCEMED LMPCSLGTFV LVQ
	Sequence without tag. The proposed Purification-Tag is based on experiences 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.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different
	isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits:
	Made to order protein - from design to production - by highly experienced protein experts.
	Protein expressed in mammalian cells and purified in one-step affinity chromatography
	• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
	• 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.
	If you are not interested in a full length protein, please contact us for individual protein
	fragments.
	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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

## Target Details

Target:	SIK1
Alternative Name:	SIK1 (SIK1 Products)
Background:	Serine/threonine-protein kinase SIK1 (EC 2.7.11.1) (Salt-inducible kinase 1) (SIK-1)
	(Serine/threonine-protein kinase SNF1-like kinase 1) (Serine/threonine-protein kinase
	SNF1LK),FUNCTION: Serine/threonine-protein kinase involved in various processes such as cell
	cycle regulation, gluconeogenesis and lipogenesis regulation, muscle growth and differentiation
	and tumor suppression. Phosphorylates HDAC4, HDAC5, PPME1, SREBF1, CRTC1/TORC1.
	Inhibits CREB activity by phosphorylating and inhibiting activity of TORCs, the CREB-specific
	coactivators, like CRTC2/TORC2 and CRTC3/TORC3 in response to cAMP signaling

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	(PubMed:29211348). Acts as a tumor suppressor and plays a key role in p53/TP53-dependent
	anoikis, a type of apoptosis triggered by cell detachment: required for phosphorylation of
	p53/TP53 in response to loss of adhesion and is able to suppress metastasis. Part of a
	sodium-sensing signaling network, probably by mediating phosphorylation of PPME1: following
	increases in intracellular sodium, SIK1 is activated by CaMK1 and phosphorylates PPME1
	subunit of protein phosphatase 2A (PP2A), leading to dephosphorylation of sodium/potassium-
	transporting ATPase ATP1A1 and subsequent increase activity of ATP1A1. Acts as a regulator
	of muscle cells by phosphorylating and inhibiting class II histone deacetylases HDAC4 and
	HDAC5, leading to promote expression of MEF2 target genes in myocytes. Also required during
	cardiomyogenesis by regulating the exit of cardiomyoblasts from the cell cycle via down-
	regulation of CDKN1C/p57Kip2. Acts as a regulator of hepatic gluconeogenesis by
	phosphorylating and repressing the CREB-specific coactivators CRTC1/TORC1 and
	CRTC2/TORC2, leading to inhibit CREB activity. Also regulates hepatic lipogenesis by
	phosphorylating and inhibiting SREBF1. In concert with CRTC1/TORC1, regulates the light-
	induced entrainment of the circadian clock by attenuating PER1 induction, represses CREB-
	mediated transcription of PER1 by phosphorylating and deactivating CRTC1/TORC1 (By
	similarity). {EC0:0000250 UniProtKB:Q60670, EC0:0000269 PubMed:14976552,
	EC0:0000269 PubMed:16306228, EC0:0000269 PubMed:18348280,
	ECO:0000269 PubMed:19622832, ECO:0000269 PubMed:29211348}.
Molecular Weight:	84.9 kDa
UniProt:	P57059
Pathways:	Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development, Regulation of
	Carbohydrate Metabolic Process
Application Details	
Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for
	functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only
Handling	

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.

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## Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months

## Images



#### Protein Structure

**Image 1.** AlphaFold protein structure predicition of Human Recombinant SIK1 Protein, UniprotID P57059

#### **Protein Structure**

**Image 2.** AlphaFold protein structure predicition of Human Recombinant SIK1 Protein, UniprotID P57059

#### **Protein Structure**

**Image 3.** AlphaFold protein structure predicition of Human Recombinant SIK1 Protein, UniprotID P57059

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