

## ProQinase™ SIK1

Salt-inducible kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: SIK1

Synonyms: MSK, SNF1LK, SIK, SIK-1, SNF1LK

Product No.: 1338-0000-1

Lot: 003

**Description:** Human SIK1, N-terminal fragment, amino acids M<sub>1</sub>-N<sub>350</sub> (as in NCBI/Protein entry NP\_775490.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Product identity:** SIK1 Lot 003 was confirmed as SIK1 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 68,476 Da

**Expression:** Baculovirus infected Sf9 cells

**Purification:** GST-Affinity Chromatography

**Activation:** This kinase was not activated by special procedures

**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20% glycerol

**Storage temperature:** -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.090 µg/µl

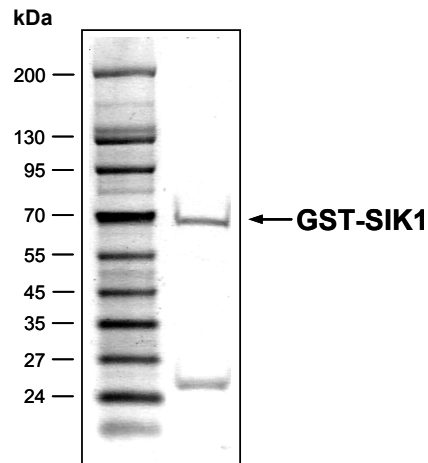
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

Specific kinase activity (P<sub>i</sub> transfer): 9 pmol/µg×min

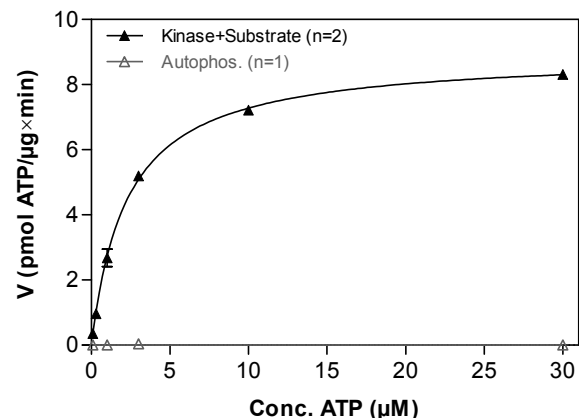
ATP-K<sub>M</sub>: 2.3 µM

SIK1 Lot 003:  
Coomassie stain



2.0 µg GST-SIK1

SIK1 Lot 003:  
Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



**Determination of K<sub>M</sub> value & Specific activity:**

- Assay conditions:
  - 60 mM HEPES-NaOH, pH 7.5
  - 3 mM MgCl<sub>2</sub>
  - 3 mM MnCl<sub>2</sub>
  - 3 µM Na-orthovanadate
  - 1.2 mM DTT
  - 50 µg / ml PEG<sub>20,000</sub>
  - ATP (variable)
  - Substrate: RBER-CHKtide, 80 µg/ml
  - SIK1: 1.0 µg/ml
- Filter binding assay
  - MSFC membrane (Millipore)

**Additional assay technology:** SIK1 Lot 003

was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details



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SIK1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RDSLEVLFGQ	240
241	PLAMVIMSEF	SADPAGQGQG	QOKPLRVGFY	DIERTLGKGN	FAVVKLARHR	VTKTQVAIKI	300
301	IDKTRLDSSN	LEKIYREVQL	MKLLNHPHII	KLYQVMETKD	MLYIVTEFAK	NGEMFDYLTS	360
361	NGHLSSENEAR	KKFWQILSAV	EYCHDHHIVH	RDLKTENLLL	DGNMDIKLAD	FGFGNFYKSG	420
421	EPLSTWCGSP	PYAAPEVFEG	KEYEGPQLDI	WSLGVVLYVL	VCGSLPFDGP	NLPTLRQRVL	480
481	EGRFRIPFFM	SQDCESLIRR	MLVVDPARRI	TIAQIRQHRW	MRAEPCPLGP	ACPAFSAHSY	540
541	TSNLGDYDEQ	ALGIMQTLGV	DRQRTVESLQ	NSSYNHFAAI	YYLLLERLKE	YRN	600

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: SIK1 fragment

SIK1 wt <sup>1</sup> Amino Acid Sequence							
1	MVIMSEFSAD	PAGQGQGQOK	PLRVGFYDIE	RTLKGKNFAV	VKLARHRVTK	TQVAIKIIDK	60
61	TRLDSSNLEK	IYREVQLMKL	LNHPHIKLY	QVMETKDMLY	IVTEFAKNGE	MFDYLTSNHG	120
121	LSENEARKKF	WQILSAVEYC	HDHHIVHRDL	KTENLLLDGN	MDIKLADFGF	GNFYKSGEPL	180
181	STWCGSPPYA	APEVFEGKEY	EGPQLDIWSL	GVVLYVLVCG	SLPFDGPNLP	TLRQRVLEGR	240
241	FRIPIFFMSQD	CESLIRRLMV	VPARRITIA	QIRQHRWMRA	EPCLPGPACP	AFSAHSYTSN	300
301	LGDYDEQALG	IMQTLGVDRQ	RTVESLQNSS	YNHFAAIYYL	LLERLKEYRN	AQCARPGPAR	360
361	QPRPRSSDLS	GLEVPQEGLS	TDPFRPALLC	PQPQTLVQSV	LQAEMDCELQ	SSLQWPLFFP	420
421	VDASCSGVFR	PRPVSPSSLL	DTAISEEARQ	GPGLEEEQDT	QESLPSSTGR	RHTLAEVSTR	480
481	LSPLTAPCIV	VSPSTTASPA	EGTSSDSCLT	FSASKSPAGL	SGTPATQGLL	GACSPVRLAS	540
541	PFLGSQSATP	VLQAQGGGLG	AVLLPVSFQE	GRRASDTSLT	QGLKAFRQQL	RKTTRTKGFL	600
601	GLNKIKGLAR	QVCQAPASRA	SRGGLSPFHA	PAQSPGLHGG	AAGSREGWSL	LEEVLQQRL	660
661	LQLQHHPAAA	PGCSQAPQPA	PAPFVIAPCD	GPGAAPLPST	LLTSGPLLLP	PPLLQTGASP	720
721	VASAAQLLDT	HLHIGTGPTA	LPAVPPPRLA	RLAPGCEPLG	LLQGDCEMED	LMPCSLGTFV	780
781	LVQ						840

blue: SIK1 sequence expressed in fusionprotein

<sup>1</sup>NCBI/Protein accession number NP\_775490.2