

## ProQinase™ SYK aa1-635

spleen associated tyrosine kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: SYK

Synonyms: /

Product No.: 0244-0000-1

Lot: 003

**Description:** Human SYK, full length, amino acids M<sub>1</sub>-N<sub>635</sub> (as in [NCBI/Protein](#) entry NP\_003168.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

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

**Theoretical MW**<sub>Fusion Protein</sub>: 104,408 Da

**Expression host:** Sf9 insect 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:** 0.094 µg/µl

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

### Biochemical Parameters:

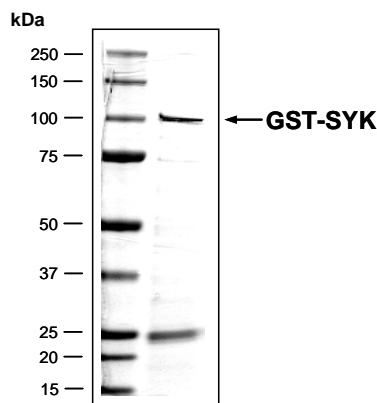
Specific kinase activity (P<sub>i</sub> transfer): 20 pmol/µg × min

ATP-K<sub>M</sub>: 2.2 µM

### Additional assay technology:

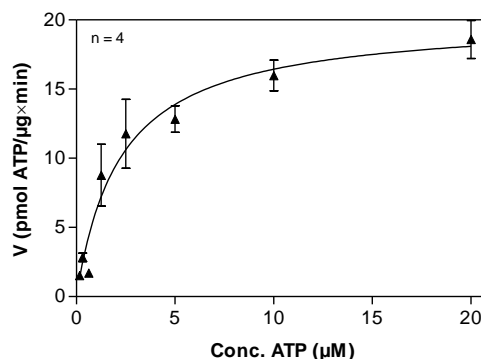
SYK Lot 003 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

### SYK Lot 003: Coomassie stain



2.0 µg GST-SYK

### SYK 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: Poly(Glu:Tyr)<sub>4:1</sub>, 20 µg/ml
  - SYK: 2.0 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

## ProQinase™ SYK

Product No.: 0244-0000-1

GST-SYK Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDKVLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRQCDG	YLQNSPLSDP	GIQMASSGMA	DSANHLPPFF	300
301	GNITREEAED	YLVQGGMSDG	LYLLRQSRNY	LGGFALSVAH	GRKAHHTYIE	RELNGTYAIA	360
361	GGRTHASPAD	LCHYHSQESD	GLVCLLKKPF	NRPQGVQPKT	GPFDLKENL	IREYVKQTWN	420
421	LQQQALEQAI	ISQKQLEKL	IATTAHEKMP	WFHGKISREE	SEQIVLIGSK	TNGKFLIRAR	480
481	DNNGSYALCL	LHEGKVLHYR	IDKDKTGKLS	IPEGKKFDL	WQLVEHYSYK	ADGLLRVLTV	540
541	PCQKIGTQGN	VNFGGRPQLP	GSHPATWSAG	GIISRIKSYS	FPPKPHRKS	PAQGNRQEST	600
601	VSNFNYEPEL	APWAADKGPQ	REALPMDTEV	YESPYADPEE	IRPKVEYLDR	KLLTLEDKEL	660
661	GSGNFGTVKK	GYQMKKVVK	TVAVKILKNE	ANDPALKDEL	LAEANVMQQL	DNPIYIVRMIG	720
721	ICEAESWMLV	MEMAELGPLN	KYLQQRHVK	DKNIIELVHQ	VSMGMKYLEE	SNFVHRDLAA	780
781	RNVLLVTQHY	AKISDFGLSK	ALRADENYK	AQTHGKWPVK	WYAPECINYY	KFSSKSDVWS	840
841	FGVLMWEAFS	YGQKPYRGMK	GSEVTAMLEK	GERMGCPAGC	PREMYDLMNL	CWTYDVENRP	900
901	GFAAVELRLR	NYYYDVVN					960

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: SYK

SYK wt <sup>1</sup> Amino Acid Sequence							
1	MASSGMADSA	NHLPPFFGNI	TREEAEDYLV	QGGMSDGLYL	LRQSRNYLGG	FALSVAHGRK	60
61	AHHTIEREL	NGTYAIAGGR	THASPADLCH	YHSQESDGLV	CLLKKPFNRP	QGVQPKTGPF	120
121	EDLKENLIRE	YVKQTWNLQ	QALEQAIISQ	KPQLEKLIAT	TAHEKMPWFH	GKISRESEQ	180
181	IVLIGSKTNG	KFLIRARDNN	GSYALCLLHE	GKVLHYRIDK	DKTGKLSIPE	GKKFDLWQL	240
241	VEHYSYKADG	LLRVLTVPCQ	KIGTQGNVNF	GGRPQLPGSH	PATWSAGGII	SRIKSYSFPK	300
301	PGHRKSSPAQ	GNRQESTVSF	NPYEPELAPW	AADKGPQREA	LPMDTEVYES	PYADPEEIRP	360
361	KEVYLDRLKLL	TLEDKELGSG	NFGTVKGGY	QMKKVVKTV	VKILKNEAND	PALKDELLAE	420
421	ANVMQQLDNP	YIVRMIGICE	AESWMLMEM	AELGPLNKYL	QQNRHVKDKN	IIELVHQVSM	480
481	GMKYLEESNF	VHRDLAARNV	LLVTQHYAKI	SDFGLSKALR	ADENYYKAQT	HGKWPVKWYA	540
541	PECINYYKFS	SKSDVWSFGV	LMWEAFSYGQ	KPYRGMKGSE	VTAMLEKGER	MGCPAGCPRE	600
601	MYDLMLNCWT	YDVENRPGFA	AVELRLRNY	YDVVN			660

blue: SYK sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_003168.2