

## ProQinase™ HCK

hemopoietic cell kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: HCK

Synonyms: JTK9

Product No.: 0408-0000-1

Lot: 001

**Description:** Human HCK, full length, amino acids M<sub>1</sub>-P<sub>505</sub> (as in NCBI/Protein entry NP\_002101.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** HCK Lot 001, was confirmed as HCK by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 86,707 Da

**Expression:** Baculovirus infected Sf9 cells

**Purification:** GST-Affinity Chromatography

**Storage buffer:** 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 4 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:** 0.143 µg/µl

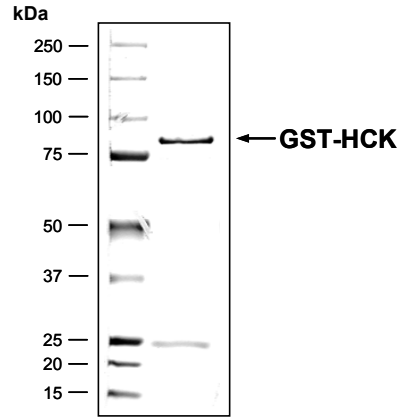
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

Specific kinase activity (P<sub>i</sub> transfer): 34 pmol/µg×min

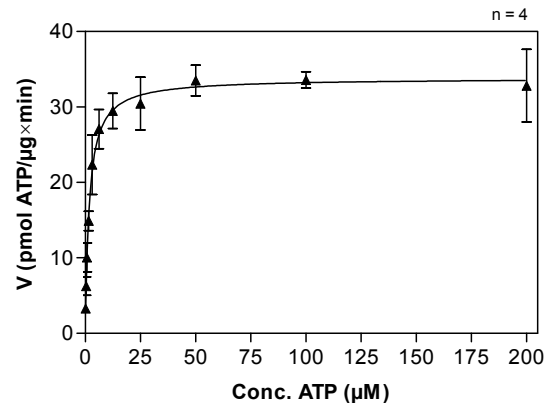
ATP-K<sub>M</sub>: 1.8 µM

**HCK Lot 001:  
Coomassie stain**



2.0 µg GST-HCK

**HCK Lot 001:  
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
  - HCK: 1.0 µg/ml
- Filter binding assay
  - MSFC membrane (Millipore)

**Additional assay technology:** HCK Lot 001

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



# ProQinase™ HCK

Product No.: 0408-0000-0

Recombinant Proteins

## HCK Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHGH	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRMGCMK	SKFLQVGGNT	FSKTETSASP	HCPVYVPDPT	STIKPGPNSH	300
301	NSNTPGIREA	GSEDIIVVAL	QDYEAIHED	LSFQKGDQMV	VLEESGEWWK	ARSLATRKEG	360
361	YIPSNYVARV	DSLETEEWFF	KGISRKDAER	QLLAPGNMLG	SFMIRDSETT	KGSYSLSVRD	420
421	YDPRQDQTVK	HYKIRTLDNG	GFYISPRSTF	STLQELVDHY	KKENDGLCQK	LSVPCMSSKP	480
481	QKPWEKDAWE	IPRESLKLEK	KLGAQGFGEV	WMATYNKHTK	VAVKTMKPGS	MSVEAFLAEA	540
541	NVMKTLQHDK	LVKLHAVVTK	EPIYIITEFM	AKGSLDLFLK	SDEGSKQPLP	KLIDFSAQIA	600
601	EGMAFIEQRN	YIHRDLRAAN	ILVSASLVCK	IADFLARVI	EDNEYTAREG	AKFPIKWTAP	660
661	EAINFGSFTI	KSDVVSFGIL	LMEIVTYGRI	PYPGMSNPEV	IRALERGYRM	PRPENCPPEL	720
721	YNIMMRCWKN	RPEERPTFEY	IQSVLDDFYT	ATESQYQQQP			780

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: HCK boxed: variation from RefSeq

## HCK wt<sup>1</sup> amino acid sequence

1	MGCMKSKFLQ	VGGNTFSKTE	TSASPHCPVY	VPDPTSTIKP	GPNSHNSNTP	GIREAGSEDI	60
61	IVVALDYEA	IHHEDLSFQK	GDQMVVLEES	GEWWKARSLA	TRKEGYIPSN	YVARVDSLET	120
121	EEWFFKGISR	KDAERQLLAP	GNMLGSEFIR	DSETTKGSYS	LSVRDYDPRQ	GDTVKHYKIR	180
181	TLDNGGFYIS	PRSTFSTLQE	LVDHYKGN	GLCQKLSVPC	MSSKPQKPWE	KDAWEIPRES	240
241	LKLEKKLGAG	QFGEVWMATY	NKHTKVAVKT	MKPGSMSVEA	FLAEANVMKT	LQHDKLVKLH	300
301	AVVTKEPIYI	ITEFMAKGS	LDFLKSDEGS	KQPLPKLIDF	SAQIAEGMAF	IEQRNYIHRD	360
361	LRAANILVSA	SLVCKIADFG	LARVIEDNEY	TAREGAKFPI	KWTAPEAINF	GSFTIKSDVW	420
421	SFGILLMEIV	TYGRIPYPM	SNPEVIRALE	RGYRMPRPEN	CPEELYNIMM	RCWKNRPEER	480
481	PTFEYIQSVL	DDFYTATESQ	YQQQP				540

blue: HCK sequence expressed in fusionprotein Red: variant in fusionprotein

<sup>1</sup>NCBI/Protein accession number NP\_002101.1

G208E: SNP variation see NCBI/dbSNP ID: rs766669962

comment: more recent accession number NP\_002101.2 features another initiation codon and a 21aa longer N-terminus