

## ProQinase™ EPHA3

EPH receptor A3

Recombinant Human Active Protein Kinase

HGNC Symbol: EPHA3

**Synonyms:** ETK; ETK1; EphA3; HEK; HEK4; TYRO4; EPH receptor A3

**Product No.:** 0351-0000-1

**Lot:** 001

**Description:** Human EPHA3, C-terminal fragment, amino acids G<sub>569</sub>-V<sub>983</sub> (as in [NCBI/Protein](#) entry NP\_005224.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** EPHA3 Lot 001, was confirmed as EPHA3 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 75,680 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, 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:** 0.140 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

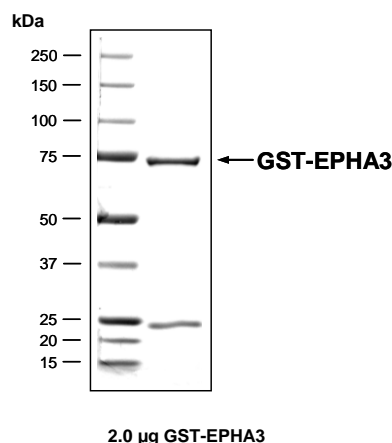
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 184 pmol/µg × min  
ATP-K<sub>M</sub>: 19.6 µM

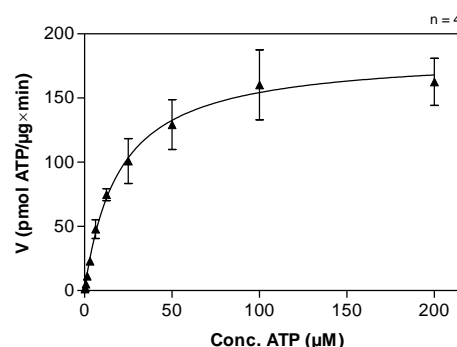
### Additional assay technology:

EPHA3 Lot 001 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

### EPHA3 Lot 001: Coomassie stain



### EPHA3 Lot 001: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- 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  
Kinase: 4 µg/ml
- Filter binding assay  
MSFC membrane (Millipore)

# ProQinase™ EPHA3

Product No.: 0351-0000-1

GST-EPHA3 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	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRGYKSK	HGADEKRLHF	GNGHLKLPGL	RTYVDPHTYE	DPTQAVHEFA	300
301	KELDATNISI	DKVVGAGEFG	EVCSGRLLKP	SKKEISVAIK	TLKVGYTEKQ	RRDFLGEASI	360
361	MGQFDHPNII	RLEGVVTKSK	PVMIVTEYME	NGSLDSFLRK	HDAQFTVIQL	VGMLRGIASG	420
421	MKYLSDMGYV	HRDLAARNIL	INSNLVCKVS	DFGLSRVLED	DPEAAYTTRG	GKIPIRWTSP	480
481	EAIAYRKFTS	ASDVWSYGIV	LWEVMSYGER	PYWEMSNDV	IKAVDEGYRL	PPMDCPAAS	540
541	YQLMLDCWQK	DRNNRPKFEQ	IVSILDKLR	NPGSLKIITS	AAARPSNLLL	DQSNVDITTF	600
601	RTTGDWLNQV	RTAHCKEIFT	GVEYSSCDTI	AKISTDDMKK	VGVTVVGPOK	KIISSEKALE	660
661	TQSKNGPVPV						720

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: EPHA3 fragment boxed: variation from RefSeq

EPHA3 wt <sup>1</sup> Amino Acid Sequence							
1	MDCQLSILL	LSCSVLDSFG	ELIPQPSNEV	NLLDSKTIQG	ELGWISYPSH	GWEEISGVDE	60
61	HYTPIRTYQV	CNVMDHSQNN	WLRTNWPVRN	SAQKIYVELK	FTLRDCNSIP	LVLGTCKETF	120
121	NLYYMESDDD	HGVKFRHQF	TKIDTIAADE	SFTQMDLGDR	ILKLNTEIRE	VGPVNKKGFY	180
181	LAFQDVGACV	ALVSVRVYFK	KCPFTVKNLA	MFPDTPMDS	QSLVEVRGSC	VNNSKEEDPP	240
241	RMYCSTEGEW	LVPIGKCSN	AGYEERGFMC	QACRPGFYKA	LDGNMKCAK	PPHSSTQEDG	300
301	SMNCRCENNY	FRADKDPSPM	ACTRPPSSPR	NVISNINETS	VILDWSWPLD	TGGRKDVTFN	360
361	IICKKCGWNI	KQCEPCSPNV	RFLPRQFGLT	NTTVTVTDLL	AHTNYTFEID	AVNGVSELSS	420
421	PPRQFAAVSI	TTNQAAPSPV	LTIKKDRTSR	NSISLSWQEP	EHPNGIILDY	EVKYYEKQEQ	480
481	ETSYTILRAR	GTNVTISSLK	PDTIYVFQIR	ARTAAGYGTN	SRKFEFETSP	DSFSISGESS	540
541	QVVMIAISAA	VAIILLTVVI	YVLIGRFGCY	KSKHGAEKR	LHFGNGHLKL	PGLRITYVDPH	600
601	TYEDPTQAVH	EFKELDATN	ISIDKVVAG	EFGEVCSGRL	KLPSKKEISV	AIKTLKVGYT	660
661	EKQRRDFLGE	ASIMQFDHP	NIIRLEGVVT	KSKPVMIVTE	YMENGLDSF	LRKHDAQFTV	720
721	IQLVGMRLGI	ASGMKYLSDM	GYVHRDLAAR	NILINSNLVC	KVSDFGLSRV	LEDDPEAAYT	780
781	TRGGKIPIRW	TSPEAIAYRK	FTSASDVWSY	GIVLWEVMSY	GERPYWEMSN	QDVIKAVDEG	840
841	YRLPPPMDCP	AALYQLMLDC	WQKDRNNRPK	FEQIVSILDK	LIRNPGSLKI	ITSAAARPSN	900
901	LLLDQSNVDI	TFRTTGDWL	NGVWTAHCKE	IFTGVEYSSC	DTIAKISTDD	MKKVGVTVVG	960
961	PQKKIISIK	ALETQSKNGP	VPV				1020

blue: kinase sequence expressed in recombinant protein Red: variant in recombinant protein

<sup>1</sup>NCBI/Protein accession number NP\_005224.2  
W924R: SNP variation see NCBI/dbSNP ID: rs35124509