

## ProQinase™ EPHA2

EPH receptor A2

Recombinant Human Active Protein Kinase

HGNC Symbol: EPHA2

Synonyms: ARCC2, ECK

Product No.: 0368-0000-1

Lot: 001

**Description:** Human EPHA2, C-terminal fragment, amino acids L<sub>585-1976</sub> (as in [NCBI/Protein](#) entry NP\_004422.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** EPHA2 Lot 001, was confirmed as EPHA2 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 73,691 Da

**Expression host:** Sf9 insect cells

**Purification:** GST-Affinity Chromatography

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

**Storage buffer:** 50 mM TRIS-HCl pH 8.0, 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:** 0.505 µg/µl

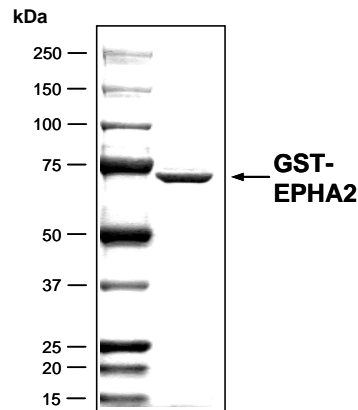
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

Specific kinase activity (P<sub>i</sub> transfer): 30 pmol/µg × min

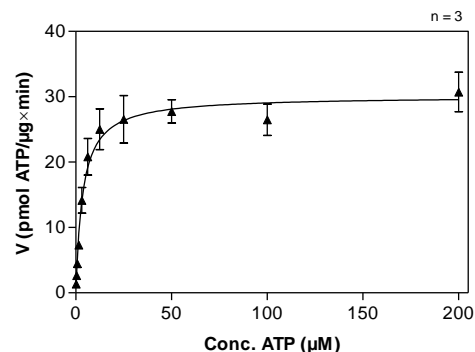
ATP-K<sub>M</sub>: 3.5 µM

**EPHA2 Lot 001:  
Coomassie stain**



2.0 µg GST-EPHA2

**EPHA2 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> 40 µg/ml
  - Kinase: 2 µg/ml
- Filter binding assay  
MSFC membrane (Millipore)

**Additional assay technology:**

EPHA2 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

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GST-EPHA2 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	LVPKSGPGLD	GICSRDKTYV	DPHTYEDPNQ	AVLKFTTEIH	PSCVTRQKVI	GAGEFGEVYK	300
301	GMLKTSSGKK	EVPVAIKTLK	AGYTEKQRVD	FLGEAGIMGQ	FSHNIIIRLE	GVISKYKPM	360
361	IITEYMENGA	LDKFLREKDG	EFSVLQLVGM	LRGIAAGMKY	LANMNYVHRD	LAARNILVNS	420
421	NLVCKVSDFG	LSRVLEDDPE	ATYTTSGGKI	PIRWTAPEAI	SYRKFTSASD	VWSFGIVMWE	480
481	VMTYGERPYW	ELSNHEVMKA	INDGFRLLPT	MDCPSAIYQL	MMQCWQERA	RRPKFADIVS	540
541	ILDKLIRAPD	SLKTLADFDP	RVSIRLPSTS	GSEGVPPFTV	SEWLESIKMQ	QYTEHFMAAG	600
601	YTAIEKVVQM	TNDDIKRIGV	RLPGHQKRIA	YSLGLKDVQ	NTVGIIPI		660

1-218: GST **Red:** HIS6-tag **Pink:** Thrombin cleavage site **blue:** EPHA2 fragment

EPHA2 wt <sup>1</sup> Amino Acid Sequence							
1	MELQAARACF	ALLWGCALAA	AAAAQGKEVV	LLDFAAAGGE	LGWLTHPYGK	GWDLMQNIMN	60
61	DMPIYMYSVC	NVMSGDQDNW	LRTNWWYRGE	AERIFIELKF	TVRDCNSFPG	GASSCKETFN	120
121	LYYAESDLDY	GTNFQKRLFT	KIDTIAPDEI	TVSSDFEARH	VKLNVEERSV	GPLTRKGFYL	180
181	AFQDIGACVA	LLSVRVYYKK	CPELLQGLAH	FPETIAGSDA	PSLATVAGTC	VDHAVVPPGG	240
241	EEPRMHCAVD	GEWLVPPIGQC	LCQAGYEKVE	DACQACSPGF	FKFEASESPC	LECPEHTLPS	300
301	PEGATSCECE	EGFFRAPQDP	ASMPCTRPPS	APHYLTAVGM	GAKVELRWTP	PQDSGGREDI	360
361	VYSVTCEQCW	PESGECGPCE	ASVRYSEPPH	GLTRTSVTVS	DLEPHMNYTF	TVEARNGVSG	420
421	LVTSRFRFTA	SVSINQTEPP	KVRLEGRSTT	SLSVSWSIIP	PQQRVWKYE	VTYRKKGDSN	480
481	SYNVRRTTEGF	SVTLDDLAPD	TTYLVQVQAL	TQEGQGAGSK	VHEFQTLSP	GSGNLAVIGG	540
541	VAVGVVLLLV	LAGVGFFIHR	RRKNQRARQS	PEDVYFSKSE	QLKPLKTYVD	PHTYEDPNQA	600
601	VLKFTTEIHP	SCVTRQKVI	AGEFGEVYK	MLKTSSGKKE	VPVAIKTLKA	GYTEKQRVDF	660
661	LGEAGIMGQF	SHNIIIRLEG	VISKYKPMI	ITEYMENGAL	DKFLREKDG	FVSLQLVGML	720
721	RGIAAGMKYL	ANMNYVHRDL	AARNILVNSN	LVCKVSDFG	SRVLEDDPEA	TYTTSGGKIP	780
781	IRWTAPEAIS	YRKFTSASDV	WSFGIVMWEV	MTYGERPYWE	LSNHEVMKAI	NDGFRLLPTM	840
841	DCPSAIYQLM	MQCWQERAR	RPKFADIVSI	LDKLIRAPDS	LKTLADFDP	VSIRLPSTSG	900
901	SEGVPPFTVS	EWLESIKMQ	YTEHFMAAGY	TAIEKVVQMT	NDDIKRIGVR	LPGHQKRIAY	960
961	SLLGLKDVQN	TVGIPI					1020

**blue:** EPHA2 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/1004422) accession number NP\_004422.2