

EPHA4

EPH receptor A4

Recombinant Human Active Protein Kinase

HGNC Symbol: EPHA4

Synonyms: TYRO1, HEK8, SEK

Product No.: 0334-0000-1

Lot: 001

Description: Human Kinase, C-terminal fragment, amino acids S₅₇₀-V₉₈₆ (as in [NCBI/Protein](#) entry NP_004429.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: EPHA4, Lot 001, was confirmed as human EPHA4 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 76,656 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, 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: 0.628 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

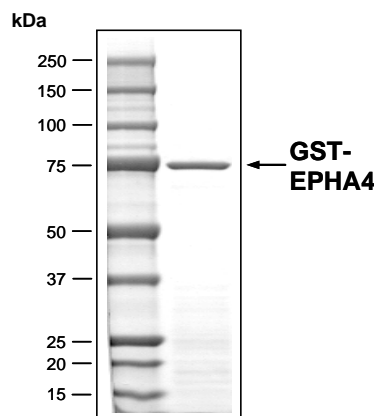
Biochemical Parameters:

Specific kinase activity (P_i transfer): 18.9 pmol/µg × min
ATP-K_M: 29 µM

Additional assay technology:

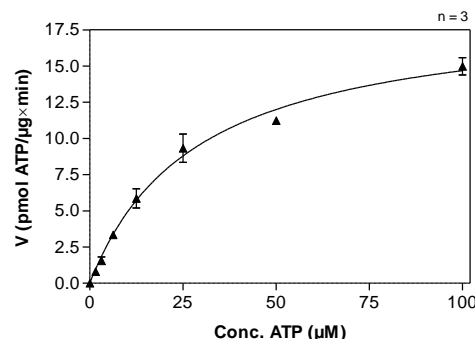
EPHA4 Lot 001 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega
ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

EPHA4 Lot 001: Coomassie stain



SP001, 2.0 µg

EPHA4 Lot 001: Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:

- Assay conditions:
 - 60 mM HEPES-NaOH, pH 7.5
 - 3 mM MgCl₂
 - 3 mM MnCl₂
 - 3 µM Na-orthovanadate
 - 1.2 mM DTT
 - 50 µg/ml PEG_{20,000}
 - ATP (variable)
 - Substrate: Poly(E/Y)_{4:1} 2.5 µg/ml
 - Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-EPHA4 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMG HHHHHH G	RRRASVAAGI	240
241	LVPRG SPGLD	GIC SRSRRRS	KYSKAKQ EAD	EKHLN QGV R	TYVDP FPTYED	PNQAV REFAK	300
301	EIDAS CIKIE	KVIGV GEFGE	VCG RLKVP G	KREIC VAIKT	LKAGY TDKQR	RDFL SEASIM	360
361	GQFD HPNIIH	LEGV VTKCKP	VMI IITEYME N	GSLDA FLRKN	DGRFT VIQLV	GMLR GIGSGM	420
421	KYLS DMSYVH	RDLA ARNILV	NSNL VCKVSD	FGMS RVLEDD	PEAA YTRRG	KIPI RWTAPE	480
481	AIAY RKFTSA	SDVW SYGIVM	WEVM SYGERP	YWDM SNQDVI	KAIE EGYRLP	PPMD RPIALH	540
541	QLML DCWQKE	RSDR PKFGQI	VNML DKLIRN	PNSL KRTGTE	SSRP NTALLD	PSSP EFSAVV	600
601	SVGD WLQAIK	MDRY KDNFTA	AGYT TLEAVV	HVNQ EDLARI	GITA ITHQNK	ILSS VQAMRT	660
661	QM QMHGRMV	PV					720

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: EPHA4 fragment **boxed**: variation from RefSeq

EPHA4 wt ¹ Amino Acid Sequence							
1	MAGIFYFALF	SCLFGICDAV	TGSRVYPANE	VTLLDSRSVQ	GELGWIASPL	EGGWEEVSIM	60
61	DEKNTPIR TY	QVCNVM EPSQ	NNWLRTDWIT	REGAQRVYIE	IKFTLRDCNS	LPGVMGTCKE	120
121	TFNLYYYESD	NDKERFIRE N	QFVKIDTIAA	DESFTQVDIG	DRIMKLNTEI	RDVGPLSKKG	180
181	FYLAFAQD VGA	CIALVSVRVF	YKKCPLTVRN	LAQFPDTITG	ADTSSLVEVR	GSCVNNSEEK	240
241	DVPKMYCGAD	GEWLVP I GNC	LCNAGHEERS	GECQACKIGY	YKALSTDATC	AKCPPHSYSV	300
301	WEGATSCTCD	RGFFRADNDA	ASMPCTRPPS	APLN LISNVN	ETSVNLEWSS	PQNTGGRQDI	360
361	SYNVVCKKCG	AGDPSKCRPC	GSGVHYTPQQ	NGLKTTK VSI	TDLLAHTNYT	FEIWA VNGVS	420
421	KYNPNPDQSV	SVTVTTNQAA	PSSIALVQAK	EVTRYSVALA	WLEPDRPNV	ILEYEVKYYE	480
481	KDQNER SYRI	VRTAARNTDI	KGLNPLTSYV	FHVRARTAG	YGDFSEPLEV	TTNTVPSRII	540
541	GDGANSTVLL	VSVSGSVVLV	VILIAAFVIS	RRRSK YSKAK	QEADE EKHLN	QGVRT YVDPF	600
601	TYED PNQAVR	EFAKE IDASC	IKIEK VIGVG	EFGEV CSGRL	KVPGK REICV	AIKTL KAGYT	660
661	DKQR RDFLSE	ASIM QFDHP	NIIH LEGVVT	KCKP VMIITE	YMENG SLDAF	LRKND GRFTV	720
721	IQLV GMLRGI	GSGM KYLSDM	SYVHR DLAAR	NILVN SNLVC	KVSD FGMSRV	LEDD PEAA Y T	780
781	TRGG KIPIRW	TAPE AIAYRK	FTSAS DVWSY	GIVM WEVMSY	GERPY WMSN	QDVI KAIEEG	840
841	YRLP PPMDCP	IALH QLMLDC	WQER SDRPK	FGQI VNMLDK	LIRNP NSLKR	TGTE SSRPNT	900
901	ALLD PSSPEF	SAVV SGDWL	QAIK MDRYKD	NFTA AGYTTL	EAVV HVNQED	LARIG ITAIT	960
961	HQNK ILSSVQ	AMRT QM QMH	GRM VPV				1020

blue: EPHA4 sequence expressed in recombinant protein **Red**: variant in recombinant protein

¹[NCBI/Protein](#) accession number NP_004429.1

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