

ALK F1174S

ALK receptor tyrosine kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: ALK

Synonyms: CD246

Product No.: 1179-0000-1

Lot: 001

Description: Human ALK, internal fragment, amino acids L₁₀₆₆-S₁₄₃₇ (as in [NCBI/Protein](#) entry NP_004295.2), with a F₁₁₇₄S point mutation, N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: ALK F1174S Lot 001, was confirmed as ALK by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 70,399 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: 0.203 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

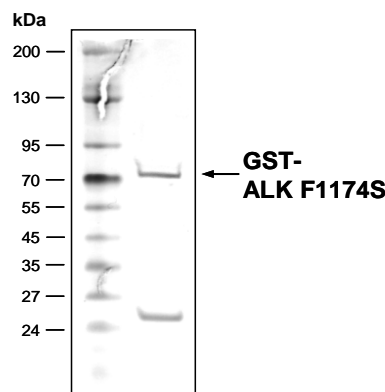
Biochemical Parameters:

Specific kinase activity (P_i transfer): 4 pmol/µg × min
ATP-K_M: 1.9 µM

Additional assay technology:

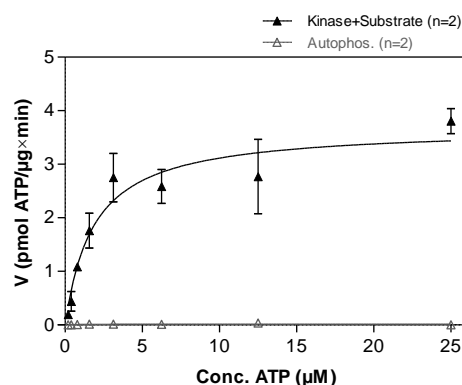
ALK F1174S Lot 001 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega. ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

ALK F1174S Lot 001: Coomassie stain



2.0 µg GST-ALK F1174S

ALK F1174S Lot 001: Determination of V_{max} and K_M value for ATP



- 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: TRK-C derived peptide 40 µg/ml
Kinase: 1 µg/ml
- Filter binding assay
MSPH membrane (Millipore)

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GST-ALK F1174S 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	PMG HHHHHG	RDS LEVLFCG	240
241	PLAMVLQAMQ	MELQSPYKYL	SKLRTSTIMT	DYNPNYCFAG	KTSSISDLKE	VPRKNITLIR	300
301	GLGHGAFGEV	YEQVSGMPN	DSPPLQVAVK	TLPEVCSEQD	ELDFLMEALI	ISKFNHQIV	360
361	RCIGVSLQSL	PRFILLELMA	GGDLKSFLRE	TRPRPSQPSS	LAMLDLLHVA	RDIACGCQYL	420
421	EENHFIHRDI	AARNCLLTC	GPRVAKIGD	FGMARDIYRA	SYRKGCCAM	LPVKWMPPEA	480
481	FMEGIFTSKT	DTWSFGVLLW	EIFSLGYMPY	PSKSNQEVLE	FVTSGGRMDP	PKNCPGPVYR	540
541	IMTQCWQHQP	EDRPNFAILL	ERIEYCTQDP	DVINTALPIE	YGPLVEEEEK	VPVRPKDPEG	600
600	VPPLLVSQQA	KREEERS					660

1-218: GST **Red:** HIS6-tag **Green:** 3C cleavage site **blue:** ALK fragment **boxed:** F1174S

ALK wt ¹ Amino Acid Sequence								
1	MGAIGLLWLL	PLLLSTAAVG	SGMGTGQRAG	SPAAGPPLQP	REPLSYSRLQ	RKSLAVDFV	60	
61	PSLFRVYARD	LLLPPSSSEL	KAGRPEARGS	LALDCAPLLR	LLGPAPGVSW	TAGSPAPAEA	120	
121	RTLSRVLKG	SVRKLRRAKQ	LVLELGEEAI	LEGCVGPPGE	AAVGLLQFNL	SELSFWWIRQ	180	
181	GEGRLRIRLM	PEKKASEVGR	EGRLSAAIRA	SQPRLLFQIF	GTGHSSLESP	TNMPSPSPDY	240	
241	FTWNLTWIMK	DSFPFLSHRS	RYGLECSFDF	PCELEYSPL	HDLRNQSWSW	RRIPSEEASQ	300	
301	MDLLDGPAGE	RSKEMPRGSF	LLLNTSADSK	HTILSPWMS	SSEHCTLAVS	VHRHLQPSGR	360	
361	YIAQLLPHNE	AAREIILLMPT	PGKHGWTVLQ	GRIGRPDNP	RVALEYISSG	NRSLSAVDFF	420	
421	ALKNCSEGTS	PGSKMALQSS	FTCWNGTVLQ	LGQACDFHQD	CAQGEDESQM	CRKLPVGFYC	480	
481	NFEDGFCGWT	QGTLSPTPQ	WQVRTLKDAR	FQDHQDHALL	LSTTDVPASE	SATVTSATFP	540	
541	APIKSSPEL	RMSWLIRGVL	RGNVSLVLE	NKTGKEQGRM	VWHVAAYEGL	SLWQWMVPL	600	
600	LDVSDRFWLQ	MVAWWGQGS	AIVAFDNISI	SLDCYLTISG	EDKILQNTAP	KSRNLFERNP	660	
661	NKELKPGENS	PRQTPIFDPT	VHWFLLTCGA	SGPHGPTQAQ	CNNAYQNSNL	SVEVGSEGPL	720	
721	KGIQIWKVPA	TDTYSISGYG	AAGGKGGKNT	MMRSHGVSVL	GIFNLEKDDM	LYILVGQQGE	780	
781	DACPSTNQLI	QKVCIGENNV	IIEEIRVNRS	VHEWAGGGGG	GGGATYVFKM	KDGVVPLII	840	
841	AAGGGGRAYG	AKTDTFHPER	LENNSSVLGL	NGNSGAAGGG	GGWNDNTSLL	WAGKSLQEGA	900	
901	TGGHSCPQAM	KKWGWETRGG	FGGGGGGCSS	GGGGGGYIGG	NAASNNDPEM	DGEDGVSFIS	960	
961	PLGILYTPAL	KVMEGHGEVN	IKHYLNCSHC	EVDECHMDPE	SHKVICFCDH	GTVLAEDGVS	1020	
1021	CIVSPTPEPH	LPLSLILSVV	TSALVAALVL	AFSGIMIVYR	RKHQELQAMQ	MELQSPYKYL	1080	
1081	SKLRTSTIMT	DYNPNYCFAG	KTSSISDLKE	VPRKNITLIR	GLGHGAFGEV	YEQVSGMPN	1140	
1141	DSPPLQVAVK	TLPEVCSEQD	ELDFLMEALI	ISKFNHQIV	RCIGVSLQSL	PRFILLELMA	1200	
1201	GGDLKSFLRE	TRPRPSQPSS	LAMLDLLHVA	RDIACGCQYL	EENHFIHRDI	AARNCLLTC	1260	
1261	GPRVAKIGD	FGMARDIYRA	SYRKGCCAM	LPVKWMPPEA	FMEGIFTSKT	DTWSFGVLLW	1320	
1321	EIFSLGYMPY	PSKSNQEVLE	FVTSGGRMDP	PKNCPGPVYR	IMTQCWQHQP	EDRPNFAILL	1380	
1381	ERIEYCTQDP	DVINTALPIE	YGPLVEEEEK	VPVRPKDPEG	VPPLLVSQQA	KREEERS	1440	
1441	PPPLPTTSSG	KAACKPTAAE	ISVRVPRGPA	VEGGHVMAF	SQSNPPSELH	KVHGSRNKPT	1500	
1501	SLWNPTYGSW	FTEKPTKKN	PIAKKEPHDR	GNLGLGESC	VPPNVATGRL	PGASLLLEPS	1560	
1561	SLTANMKEVP	LFRLRHFP	PCG NVNYGYQQQ	GLP	LEAATAPG	AGHYEDTILK	SKNSMNPQGP	1620

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

¹[NCBI/Protein](#) accession number NP_004295.2