

ALK wt (HIS-tag)

anaplastic lymphoma kinase (Ki-1)

Recombinant Human Active Protein Kinase

HGNC Symbol: ALK

Synonyms: CD246, NBLST3

Product No.: 1048-0000-1

Lot: 005

Description: Human ALK, internal fragment, amino acids L₁₀₆₆-S₁₄₃₇ (as in [NCBI/Protein](#) entry NP_004295.2), N-terminal FLAG, C-terminal HIS₈ fusion protein, expressed in E.coli

Product identity: ALK wt Lot 005, was confirmed as ALK by sequence specific Western blotting

Theoretical MW_{Fusion Protein}: 47,991 Da

Expression host: E.coli

Purification: Immobilized Metal 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, 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: 0.673 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

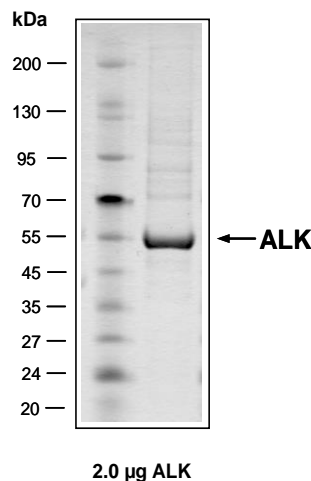
Biochemical Parameters:

Specific kinase activity (P_i transfer): 14 pmol/µg × min
ATP-K_M: 4.1 µM

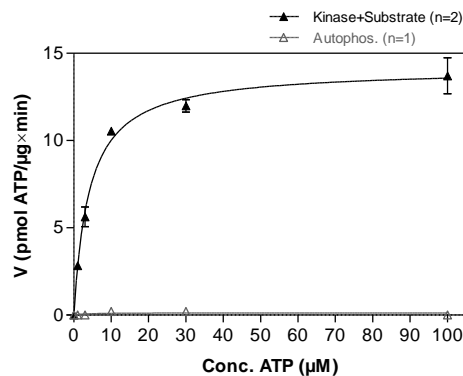
Additional assay technology:

ALK wt Lot 005 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 wt Lot 005: Coomassie stain



ALK wt Lot 005: 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(Ala:Glu:Lys:Tyr)_{6:2:5:1} 20 µg/ml
 - Kinase: 1.0 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

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HIS-ALK wt Recombinant Fusion Protein Amino Acid Sequence							
1	MDYKDDDDKD	YKDDDDKDYK	DDDDKDYKDD	DDKSGGGS	LQ AMQELQSPE	YKLSKLRST	60
61	IMTDYNPNYC	FAGKTSSISD	LKEVPRKNIT	LIRGLGHGAF	GEVYEGQVSG	MPNDPSPLQV	120
121	AVKTLPEVCS	EQDELDFLME	ALIISKFNHQ	NIVRCIGVSL	QSLPRFILLE	LMAGGDLKSF	180
181	LRETRPRPSQ	PSSLAMLDLL	HVARDIACGC	OYLEENHFH	RDIAARNCLL	TCPPGPRVAK	240
241	IGDFGMARDI	YRASYYRKGK	CAMPLVKWMP	PEAFMEGIFT	SKTDTWSFGV	LLWEIFSLGY	300
301	MPYPSKSNQE	VLEFVTSGGR	MDPPKNCPGP	VYRIMTQCWQ	HQPEDRPNFA	IILERIEYCT	360
361	QDPDVINTAL	PIEYGPLVEE	EEKVPVRPKD	PEGVPLLVS	QQAKREEERS	KLLEHHHHHH	420
421	HH						480

Red: HIS6-tag Green: FLAG-tag sequence blue: ALK fragment

ALK wt ¹ Amino Acid Sequence							
1	MGAIGLLWLL	PLLSTAAVG	SGMGTGQRAG	SPAAGPPLQP	REPLSYSRLQ	RKSLAVDFVV	60
61	PSLFRVYARD	LLLPPSSSEL	KAGRPEARGS	LALDCAPLLR	LLGPAPGVSW	TAGSPAPAEA	120
121	RTLSRVLKGK	SVRKLRRAKQ	LVLELGEEAI	LEGCVGPPGE	AAVGLLQFNL	SELSFWIRQ	180
181	GEGRLRIRLM	PEKKASEVGR	EGRLSAAIRA	SQPRLLFQIF	GTGHSSLESP	TNMPSPSPDY	240
241	FTWNLTWIMK	DSFPFLSHRS	RYGLECSFDF	PCELEYSPL	HDLRNQSWSW	RRIPSEEASQ	300
301	MDLLDGGPGE	RSKEMPRGSF	LLLNTSADSK	HTILSPWMS	SSEHCTLAVS	VHRHLQPSGR	360
361	YIAQLLPHNE	AAREILLMPT	PGKHGWTVLQ	GRIGRPDNP	RVALEYISSG	NRSLSAVDFF	420
421	ALKNCSEGT	PGSKMALQSS	FTCWNGTVLQ	LGQACDFHQD	CAQGEDESQM	CRKLPVGFYC	480
481	NFEDGFCGWT	QGTLSPHTPQ	WQVRTLKDAR	FQDQDHALL	LSTTDVPASE	SATVTSATFP	540
541	APIKSSPCEL	RMSWLIRGVL	RGNVSLVLE	NKTGKEQGRM	VVHVAAYEGL	SLWQWMLPL	600
600	LDVSDRFLWQ	MVAWWGQGS	AIVAFDNISI	SLDCYLTISG	EDKILQNTAP	KSRNLFERNP	660
661	NKELKPGENS	PRQTPIFDPT	VHWFLLTTCGA	SGPHGPTQAA	CNNAYQNSNL	SVEVGSEGPL	720
721	KGIQIWKVPA	TDTYSISGYG	AAGGKGGKNT	MMRSHGVSVL	GIFNLEKDDM	LYILVGGQQE	780
781	DACPSTNQLI	KQVCIGENNV	IEEEIRVNRS	VHEWAGGGGG	GGGATYVFKM	KDGVVPLII	840
841	AAGGGGRAYG	AKTDTFHPER	LENNSSVLGL	NGNSGAAGGG	GGWNDNTSL	WAGKSLQEGA	900
901	TGGHSCPQAM	KKWGWETRGG	FGGGGGGCSS	GGGGGGYIGG	NAASNNDPEM	DGEDGVSFIS	960
961	PLGILYTPAL	KVMEGHGEVN	IKHYLNCSHC	EVDECHMDPE	SHKVICFCDH	GTVLAEDGVS	1020
1021	CIVSPTPEPH	LPLSLILSVV	TSALVAALVL	AFSGIMIVYR	RKHQELQAMQ	MELQSPEYKL	1080
1081	SKLRTSTIMT	DYNPNYCFAG	KTSSISDLKE	VPRKNITLIR	GLGHGAFGEV	YEQVSGMPN	1140
1141	DPSPLQVAVK	TLPEVCSEQD	ELDFLMEALI	ISKFNHQIV	RCIGVSLQSL	PRFILLELMA	1200
1201	GGDLKSFLRE	TRPRPSQPSS	LAMLDLLHVA	RDIACGCQYL	EENHFHHRDI	AARNCLLTC	1260
1261	GPRVAKIGD	FGMARDIYRA	SYRKGCCAM	LPVKWMPPEA	FMEGIFTSKT	DTWSFGVLLW	1320
1321	EIFSLGYMPY	PSKSNQEVLE	FVTSGGRMDP	PKNCPGPVYR	IMTQCWQHQP	EDRPNFAIIL	1380
1381	ERIEYCTQDP	DVINTALPIE	YGPLVEEEEK	VPVRPKDPEG	VPPLLVSQQA	KREEERS ^{PAA}	1440
1441	PPPLPTTSSG	KAACKPTAAE	ISVRVPRGPA	VEGGHVNMFA	SQSNPPSELH	KVHGSRNKPT	1500
1501	SLWNPTYGSW	FTEKPTKKN	PIAKKEPHDR	GNLGLEGSCT	VPPNVATGRL	PGASLLLEPS	1560
1561	SLTANMKEVP	LFRLRHFPCC	NVNYGYQQG	LPLEAATAPG	AGHYEDTILK	SKNSMNQGP	1620

blue: ALK sequence expressed in recombinant protein

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

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