

ProQinase™ TLK2

tousled-like kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: TLK2

Synonyms: PKU-alpha

Product No.: 1110-0000-1

Lot: 002

Description: Human TLK2, C-terminal fragment, amino acids R₃₉₀-N₇₅₀ (as in NCBI/Protein entry NP_006843.2), N-terminal 4xFLAG, C-terminal HIS₈ fusion protein, expressed in Sf9 insect cells

Product identity: TLK2 Lot 002, was confirmed as TLK2 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 47,654 Da

Expression: Baculovirus infected Sf9 cells

Purification: Immobilized Metal Affinity Chromatography

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: 0.458 µg/µl

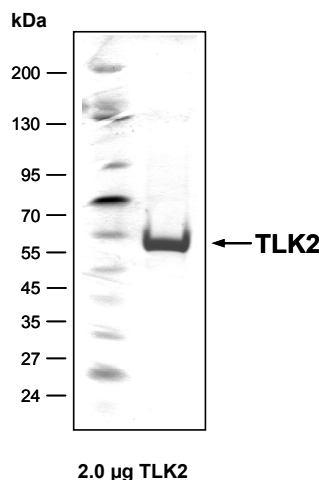
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

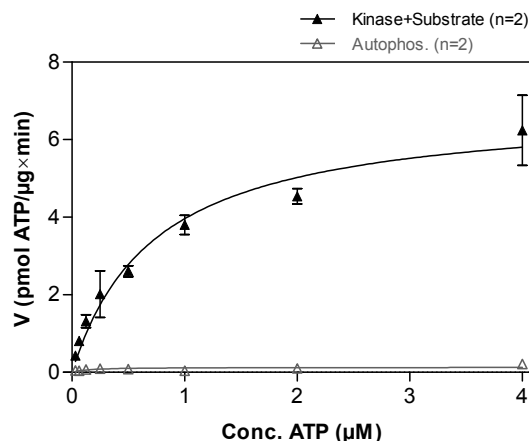
Specific kinase activity (P_i transfer): 7 pmol/µg×min

ATP-K_M: 0.7 µM

TLK2 Lot 002: Coomassie stain



TLK2 Lot 002: 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: RBER-CHKtide 60 µg/ml
 - TLK2: 1.0 µg/ml
- Filter binding assay
 - MSFC membrane (Millipore)

Additional assay technology: TLK2 Lot 002

was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details



Recombinant Proteins

ProQinase™ TLK2

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TLK2 Recombinant Fusion Protein Amino Acid Sequence							
1	M	DYKDDDDKD	YKDDDDKDYK	DDDDKDYKDD	DDKSGGGSRL	GHLKKEEAEI QAELERLERV	60
61	RNLHIRELKR	IHNEDNSQFK	DHPTLNDRYL	LLHLLGRGGF	SEVYKAFDLT	EQRYVAVKIH	120
121	QLNKNWRDEK	KENYHKHACR	EYRIHKELDH	PRIVKLYDYF	SLDTDSFCTV	LEYCEGNLDL	180
181	FYLKQHKLMS	EKEARSIIMQ	IVNALKYLN	IKPPIIHYDL	KPGNILLVNG	TACGEIKITD	240
241	FGLSKIMDDD	SYNSVDGMEL	TSQGAGTYW	LPPECFVVGK	EPPKISNKVD	VWSVGVIFYQ	300
301	CLYGRKPFQGH	HNQSQQDILQE	ENTILKATEVQ	FPPKPVVTP	EAKAFIRRCLA	YRKEDRIDVQ	360
361	QLACDPYLLP	HIRKSVSTSS	PAGAAIASTS	GASNNSSSNK	LLLEHHHHHHH	H	420

1-218: GST **Pink**: 4xFLAG sequence **Red**: HIS8-tag **blue**: TLK2 fragment

TLK2 wt ¹ Amino Acid Sequence							
1	MMEELHSLDP	RRQELLEAF	TGVGVSKGPL	NSESSNQSLC	SVGSLSDKEV	ETPEKKQNDQ	60
61	RNRKRKAEPY	ETSQGGKTPR	GHKISDYFEF	AGGSAPGTSP	GRSVPPVARS	SPQHSLSNPL	120
121	PRRVEQPLYG	LDGSAAKEAT	EEQSALPTLM	SVMLAKPRLD	TEQLAQRGAG	LCFTFVSAQQ	180
181	NSPSSTGSGN	TEHSCSSQKQ	ISIQHRQTQS	DLTIEKISAL	ENSKNSDLEK	KEGRIDDLR	240
241	ANCDLRRQID	EQQKMLEKYK	ERLNRCVTMS	KKLLIEKSKQ	EKMACRDKSM	QDRLRLGHFT	300
301	TVRHGASFTE	QWTDGYAFQN	LIKQQERINS	QREEIERQRK	MLAKRKPPAM	GQAPPATNEQ	360
361	KQRKSKTNGA	ENETLTLAAY	HEQEEIFKLR	LGHLKKEEAE	IQAELERLER	VRNLHIRELK	420
421	RIHNEDNSQF	KDHPTLNDRY	LLLHLLGRGG	FSEVYKAFDL	TEQRYVAVKI	HQLNKNWRDE	480
481	KKENYHKHAC	REYRIHKELD	HPRIVKLYDY	FSLDTDSFCT	VLEYCEGNLD	DFYLKQHKLM	540
541	SEKEARSIIM	QIVNALKYLN	EIKPPIIHYD	LKPGNILLVN	GTACGEIKIT	DFGLSKIMDD	600
600	DSYNSVDGME	LTSQGAGTYW	YLPPECFVVG	KEPPKISNKV	DVWSVGVIFY	QCPLYGRKPFQ	660
661	HNQSQQDILQ	ENTILKATEV	QFPPKPVVTP	EAKAFIRRCL	AYRKEDRIDV	QQLACDPYLL	720
721	PHIRKSVSTS	SPAGAAIAST	SGASNNSSSN				780

blue: TLK2 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_006843.2

Recombinant Proteins