

## ProQinase™ TLK1

tousled-like kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: TLK1

Synonyms: PKU-beta

Product No.: 1109-0000-1

Lot: 002

**Description:** Human TLK1, C-terminal fragment, amino acids R<sub>406</sub>-Y<sub>766</sub> (as in [NCBI/Protein](#) entry NP\_036422.3), N-terminal 4xFLAG, C-terminal HIS<sub>8</sub> fusion protein, expressed in Sf9 insect cells

**Product identity:** TLK1 Lot 002, was confirmed as TLK1 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 47,963 Da

**Expression host:** Sf9 insect cells

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

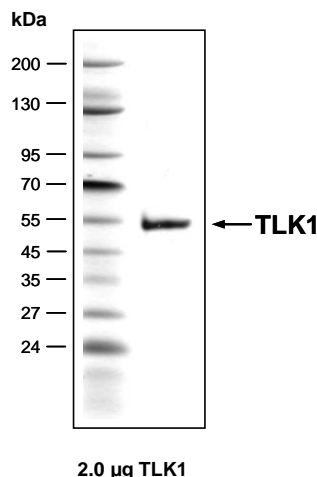
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 3 pmol/µg × min  
ATP-K<sub>M</sub>: 0.6 µM

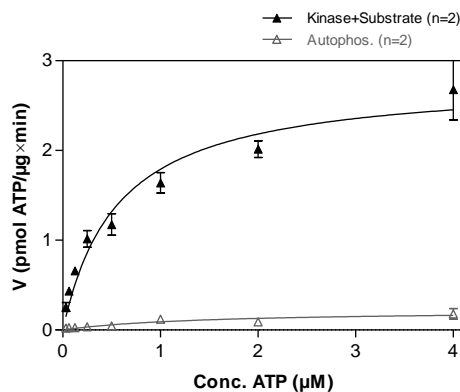
### Additional assay technology:

TLK1 Lot 002 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

### TLK1 Lot 002: Coomassie stain



### TLK1 Lot 002: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- 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: RBER-CHKtide 50 µg/ml  
Kinase: 1 µg/ml
- Filter binding assay  
MSFC membrane (Millipore)

## ProQinase™ TLK1

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TLK1 Recombinant Fusion Protein Amino Acid Sequence							
1	<b>MDYKDDDDKD</b>	<b>YKDDDDKDYK</b>	<b>DDDDKDYKDD</b>	<b>DDK</b> SGGGSRL	GHLKKEEAEI	QAELERLERV	60
61	RNLHIRELKR	INNEDNSQFK	DHPTLNERYL	LLHLLGRGGF	SEVYKAFDLY	EQRYAAVKIH	120
121	QLNKSQRDEK	KENYHKHACR	EYRIHKELDH	PRIVKLYDYF	SLDTRDFTCTV	LEYCEGNLDD	180
181	FYLKQHKLMS	EKEARSIVMQ	IVNALRYLNE	IKPPIIHYYL	KPGNILLVDG	TACGEIKITD	240
241	FGLSKIMDD	SYGVDGMDLT	SQGAGTYWYL	PPECFVVGKE	PPKISNKVDV	WSVGVVIFQC	300
301	LYGRKPFQHN	QSQQDILQEN	TILKATEVQF	PVKPVVSSEA	KAFIRRCILAY	RKEDRFDVHQ	360
361	LANDPYLLPH	MRRSNSSGNL	HMAGLTASPT	PPSSSIITYK	LL <b>HHHHHHH</b>	<b>H</b>	420

1-218: GST **Red**: HIS8-tag **Pink**: FLAG-tag **blue**: TLK1 fragment

TLK1 wt <sup>1</sup> Amino Acid Sequence							
1	MSVQSSSSGSL	EGPPSWSQLS	TSPTPGSAAA	ARSLLNHTPP	SGRPREGAMD	ELHSLDPRRQ	60
61	ELLEARFTGV	ASGSTGSTGS	CSVGAKASTN	NESSNHSFGS	LGSLSDKESE	TPEKKQSESS	120
121	RGRKRKAENQ	NESSQGKSIG	GRGHKISDYF	EYQGGNGSSP	VRGIPPAIRS	PQNSHSHSTP	180
181	SSSVRPNSPS	PTALAFGDHP	IVQPKQLSFK	IIQTDLTMLK	LAALESNKIQ	DLEKKEGRID	240
241	DLRANCDLR	RQIDEQQKLL	EKYKERLNKC	ISMSKKLLIE	KSTQEKLSR	EKSMQDRRL	300
301	GHFTTVRHGA	SFTEQWTDGF	AFQNLVKQQE	WVNQQREDIE	RQRKLLAKRK	PPTANNSQAP	360
361	STNSEPKQRK	NKAVNGAEND	PFVVRPNLPQL	LTLAEYHEQE	EIFKLRGLHL	<b>KKEEAEIQAE</b>	420
421	<b>LERLERVRNL</b>	<b>HIRELKRINN</b>	<b>EDNSQFKDHP</b>	<b>TLNERYLLH</b>	<b>LLGRGGFSEV</b>	<b>YKAFDLYEQR</b>	480
481	<b>YAAVKIHQLN</b>	<b>KSWRDEKKN</b>	<b>YKHACREYR</b>	<b>IHKELDHPRI</b>	<b>VKLYDYFSLD</b>	<b>TDTFCTVLEY</b>	540
541	<b>CEGNLDFYL</b>	<b>KQHKLMSEKE</b>	<b>ARSIVMQIVN</b>	<b>ALRYLNEIKP</b>	<b>PIIHYYDLKPG</b>	<b>NILLVDGTAC</b>	600
600	<b>GEIKITDFGL</b>	<b>SKIMDDDSYG</b>	<b>VDGMDLTSQG</b>	<b>AGTYWYLPPE</b>	<b>CFVVGKEPPK</b>	<b>ISNKVDVWSV</b>	660
661	<b>GVVIFQCLYG</b>	<b>RKPFQHNQSQ</b>	<b>QDILQENTIL</b>	<b>KATEVQFPVK</b>	<b>PVVSSEAKAF</b>	<b>IRRCLAYRKE</b>	720
721	<b>DRFDVHQLAN</b>	<b>DPYLLPHMRR</b>	<b>SNSSGNLHMA</b>	<b>GLTASPTPPS</b>	<b>SSIITY</b>		780

**blue**: TLK1 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein/NP_036422.3) accession number NP\_036422.3