

ProQinase™ TBK1

TANK-binding kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: TBK1

Synonyms: NAK, T2K

Product No.: 0749-0000-1

Lot: 006

Description: Human TBK1, full length, amino acids M₁-L₇₂₉ (as in [NCBI/Protein](#) entry NP_037386.1), untagged, expressed in Sf9 insect cells

Product identity: TBK1 Lot 006 was confirmed as TBK1 by mass spectroscopy LC-ESI-MS/MS analysis

Theoretical MW_{Fusion Protein}: 84,225 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, 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: 0.132 µg/µl

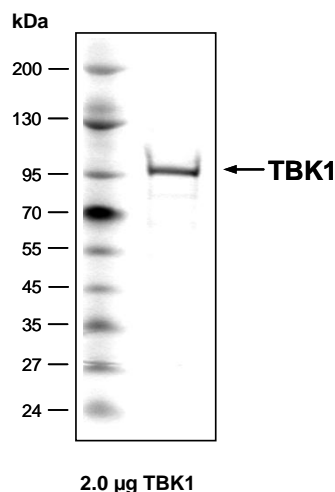
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

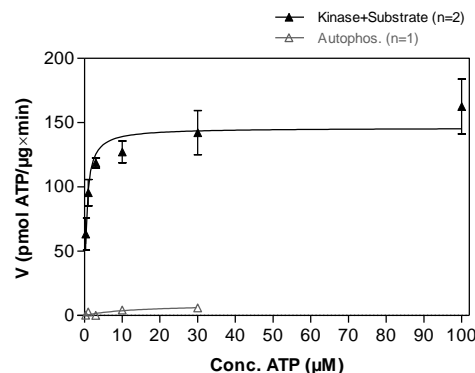
Specific kinase activity (P_i transfer): 146 pmol/µg × min

ATP-K_M: 0.5 µM

**TBK1 Lot 006:
Coomassie stain**



**TBK1 Lot 006:
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: Casein, 100 µg/ml
 - TBK1: 0.2 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

TBK1 Lot 006 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

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TBK1 Recombinant Fusion Protein Amino Acid Sequence							
1	GPLAMLMQST	SNHLWLLSDI	LGQGATANVF	RGRHKKTGDL	FAIKVFNNIS	FLRPVDVQMR	60
61	EFEVLKKNLH	KNIVKLFAIE	EETTTRHKVL	IMEFCPCGSL	YTVLEEPSNA	YGLPESEFLI	120
121	VLRDVGGMN	HLRENGIVHR	DIKPGNIMRV	IGEDGQSVYK	LTDFGAAREL	EDDEQFVSLY	180
181	GTEEYLHPDM	YERAVLRKDH	QKKYGATVDL	WSIGVTFYHA	ATGSLPFRPF	EGPRRNKEVM	240
241	YKIITGKPSG	AISGVQKAEN	GPIDWSGDMP	VSCSLSRGLQ	VLLTPVLANI	LEADQEKCWG	300
301	FDQFFAETSD	ILHRMVIHVF	SLQQMTAHKI	YIHSYNTATI	FHELVKQTK	IISSNQELIY	360
361	EGRRLVLEPG	RLAQHFPKTT	EENPIFVVS	EPLNTIGLIY	EKISLPKVHP	RYDLGDGASM	420
421	AKAITGVVVCY	ACRIASTLLL	YQELMRKGR	WLIELIKDDY	NETVHKKTEV	VITLDFCIRN	480
481	IEKTVKVYEK	LMKINLEAAE	LGEISDIHTK	LLRLSSSQGT	IETSLQDIDS	RLSPGGSLAD	540
541	AWAHQEGTHP	KDRNVEKLQV	LLNCMTEIYY	QFKKDKAER	LAYNEEQIHK	FDKQKLYYHA	600
600	TKAMTHFTDE	CVKKYEAFNL	KSEEWIRKML	HLRKQLLSLT	NQCFDIEEEV	SKYQEYTNEL	660
661	QETLPQKMF	ASSGIKHTMT	PIYPSNTLV	EMTLGMKKLK	EEMEGVVKEL	AENNHILERE	720
721	GSLTMDGGLR	NVDCL					780

1-6: legacy from 3C cleavage blue: TBK1

TBK1 wt ¹ Amino Acid Sequence							
1	MQSTSNHLWL	LSDILGQGAT	ANVFRGRHKK	TGDLFAIKVF	NNISFLRPVD	VQMRFEVLK	60
61	KLNHNKIVKL	FAIEEETTR	HKVLIMEFCP	CGSLYTVLEE	PSNAYGLPES	EFLIVLRDVV	120
121	GGMHLRENG	IVHRDIKPGN	IMRVIGEDGQ	SVYKLTDFGA	ARELEDDEQF	VSLYGTTEYL	180
181	HPDMYERAVL	RKDHQKKYGA	TVDLWSIGVT	FYHAATGSLP	FRPFEGPRRN	KEVMYKIIITG	240
241	KPSGAISGVQ	KAENGPIDWS	GDMPVSCSLS	RGLQVLLTPV	LANILEADQE	KCWGFDQFFA	300
301	ETSDILHRMV	IHFVSLQQMT	AHKIYIHSYN	TATIFHELVI	KQTKIISSNQ	ELIYEGRRLV	360
361	LEPGRLAQHF	PKTTEENPIF	VVSREPLNTI	GLIYEKISLP	KVHPRYDLG	DASMAKAITG	420
421	VVCYACRIAS	TLLLYQELMR	KGIRWLIELI	KDDYNETVHK	KTEVVITLDF	CIRNIEKTVK	480
481	VYEKLMKINL	EAAELGEISD	IHTKLLRLSS	SQGTIETSLQ	DIDSRLSPGG	SLADAWAHQE	540
541	GTHPKDRNVE	KLQVLLNCMT	EIYYQFKKDK	AERRLAYNEE	QIHKFDKQKL	YYHATKAMTH	600
600	FTDECVKKYE	AFLNKSEEWI	RKMLHLRKQL	LSLTNQCFDI	EEEVSKYQY	TNELQETLPQ	660
661	KMFTASSGIK	HTMTPIYPSS	NTLVEMTLGM	KKLKEEMEGV	VKELAENNI	LERFGSLTMD	720
721	GGLRNVDCL						780

blue: TBK1 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_037386.1