

ProQinase™ TRK-B

neurotrophic receptor tyrosine kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: NTRK2

Synonyms: Gp145-TrkB

Product No.: 0686-0000-1

Lot: 004

Description: Human TRK-B, C-terminal fragment, amino acids V₅₂₆-G₈₃₈ (as in [NCBI/Protein](#) entry NP_006171.2), activated, N-terminal GST-HIS₆ fusion protein with a Thrombin and 3C cleavage site, expressed in Sf9 insect cells

Product identity: TRK-B Lot 004, was confirmed as TRK-B by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 66,818 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: in vitro auto activation

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: 0.133 µg/µl

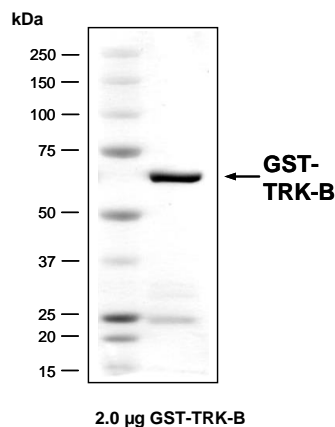
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

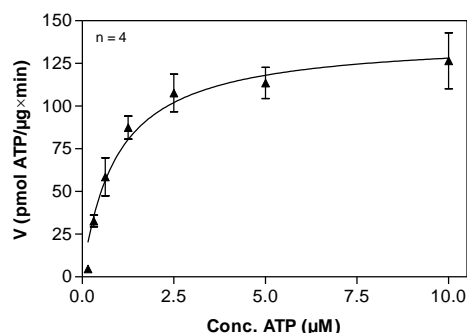
Specific kinase activity (P_i transfer): 140 pmol/µg × min

ATP-K_M: 0.9 µM

**TRK-B Lot 004:
Coomassie stain**



**TRK-B Lot 004:
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(Glu:Tyr)_{4:1}, 5 µg/ml
 - Kinase: 0.5 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Additional assay technology:

TRK-B Lot 004 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

ProQinase™ TRK-B

Product No.: 0686-0000-1

GST-TRK-B Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDKVLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI	PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	240
241	LVPRGSPGLD	GIYARDSLE	VLFQGPLAMVI	ENPQYFGITN	SQLKPDTFVQ	HIKRHNIVLK	300
301	RELGEGAFGK	VFLAECYNLC	PEQDKILVAV	KTLKDASDNA	RKDFHREAEL	LTNLQHEHIV	360
361	KFYGVCEG	PLIMVFEYMK	HGDLNKF	LRA HGPDAV	LMAE GNPPT	ELTQS QMLHIAQQIA	420
421	AGMYYLASQH	FVHRDLATRN	CLVGENLLVK	IGDFGMSRDV	YSTDYRVGG	HTMLPIRWMP	480
481	PESIMYRKFT	TESDVWSLGV	VLWEIFTYK	QPWYQLSNNE	VIECITQGRV	LQRPTCPQE	540
541	VYELMLGCWQ	REPHMRKNIK	GIHTLLQLNL	A KASPVYLDIL	G		600

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site Green: 3C cleavage site blue: TRK-B fragment

TRK-B wt ¹ Amino Acid Sequence								
1	MSSWIRWHGP	AMARLWGC	FWRAAF	ACPTSC	KCSA	SRIWCSDPSP	GIVAFPRLEP	60
61	NSVDPENITE	IFIANQKR	LE IIN	EDDVEAY	VGLRNL	TIVD SGLKFVAHKA	FLKNSNLQHI	120
121	NFTRNKLTSL	SRKHFRH	LDL SEL	LILVGNP	TCSCD	IMWIK TLQEAKSSPD	TQDLYCLNES	180
181	SKNIPLANLQ	IPNCGLP	SAN LA	APNLTVEE	GKSITL	SCSV AGDPVPNMYW	DVGNLVSKHM	240
241	NETSHTQGS	L RITN	ISSDDS	GKQISC	V AEN	LVGEDQDSVN	LTVHFAPTIT	300
301	WCIPFTVKG	N PKPAL	QWFYN	GAILNES	KYI	CTKIHVTNHT	EYHGCLQLDN	360
361	LIKNEYGKD	EKQISAH	FMG WPG	IDDGANP	NYPD	VIYEDY	GTAANDIGDT	420
421	DVTDKTGREH	LSVYAV	VVIA	SVVGF	CLLVM	LFLCLKLARHS	KFGMKDFSWF	480
481	VGPASVISND	DDSASPL	HHI	SNGSNT	PSSS	EGGPD	AVIIG MTKIPVIENP	540
541	KPDTFVQH	IK RHN	IVLKREL	GEGAFG	KVFL	AECYNLCPEQ	DKILVAVKTL	600
600	FHREAELLTN	LQHEHIV	KFY GVC	VEGDPLI	MVFEY	MKHGD LNKFLRAHGP	DAVLM AEGNP	660
661	PTELTQSQML	HIAQQIA	AGM VY	LASQHFVH	RDLAT	RNCLV GENLLVKIGD	FGMSRDVYST	720
721	DYYRVGGHTM	LPIRWMP	PES IMY	RKFTTES	DVWSL	GVVLW EIFTY	GKQPW YQLSNNEVIE	780
781	CITQGRVLR	PRTCPQ	EVYE	LMLGCW	QREP	HMRKNIKGIH	TLLQLAKAS	840
							PVYLDILG	

blue: TRK-B sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_006171.2