

TRK-A

neurotrophic receptor tyrosine kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: NTRK1

Synonyms: MTC; TRK; TRK1; TRKA

Product No.: 0311-0000-2

Lot: 003

Description: Human TRK-A, C-terminal fragment, amino acids G₄₄₃-G₇₉₆ (as in [NCBI/Protein](#) entry NP_002520.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: TRK-A wt Lot 003, was confirmed as TRK-A by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 69,726 Da 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: 0.214 µg/µl

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

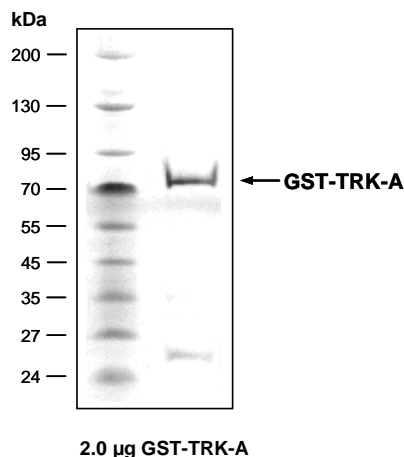
Biochemical Parameters:

Specific kinase activity (P_i transfer): 100 pmol/µg × min
ATP-K_M: 2.3 µM

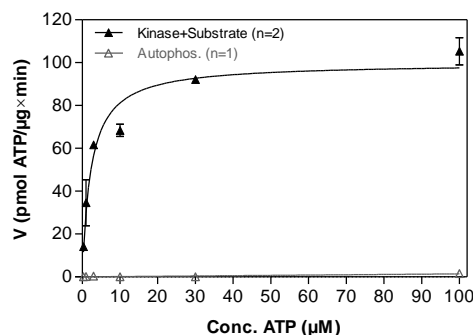
Additional assay technology:

TRK-A wt Lot 003 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

**TRK-A wt Lot 003:
Coomassie stain**



**TRK-A wt Lot 003:
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:TRK-C derived peptide, 80 µg/ml
 - Kinase: 1 µg/ml
- Filter binding assay
MSPH membrane (Millipore)

TRK-A

Product No.: 0311-0000-2

GST-TRK-A Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDKVLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMG HHHHHG	RRRASVAAGI	240
241	LVPRG SPGLD	GIYARGIQAS	MGRRNKFGIN	RPAVLAPEDG	LAMSLHFMTL	GGSSLSPTGE	300
301	KGSGLQGHII	ENPQYFSDAC	VHHIKRRDIV	LKWELGEGAF	GKVFLAECHN	LLPEQDKMLV	360
361	AVKALKEASE	SARQDFQREA	ELLTMLQHQH	IVRFFGVCTE	GRPLLMVF EY	MRHGDLNRFL	420
421	RSHGPDAKLL	AGGEDVAPGP	LGLGQLLAVA	SQVAAGMVYL	AGLHFVHRDL	ATRNCLVGGQ	480
481	LVVKIGDFGM	SRDIYSTDY	RVGGRTMLPI	RWMPPE S ILY	RKFTTESDVW	SFGVVLWEIF	540
541	TYGKQPWYQL	SNTEAIDCIT	QGRELERPRA	CPPEVYAIMR	GCWQREPQQR	HSIKDVHARL	600
601	QALAQAPPVY	LDVLG					660

1-218: GST **Red:** HIS6-tag **Pink:** Thrombin cleavage site **blue:** TRK-A fragment

TRK-A wt ¹ Amino Acid Sequence							
1	MLRGRRGQL	GWHSWAAGPG	SLLAWLILAS	AGAAPCPDAC	CPHGSSGLRC	TRDGALDSLH	60
61	HLPGAENLTE	LYIENQQHLQ	HLELRDLRGL	GELRNLTIVK	SGLRFVAPDA	FHFTPRLSRL	120
121	NLSFNAL E SL	SWKTVQGLSL	QELVLSGNPL	HCSCALRWLQ	RWEE E GLGGV	PEQKLQCHGQ	180
181	GPLAHMPNAS	CGVPTLKVQV	PNASVDVGD	VLLRCQVEGR	GLEQAGWILT	ELEQSATVMK	240
241	SGGLPSLGLT	LANVTSDLNR	KNVTCWAEND	VGRAEVSQVQ	NVSFPASVQL	HTAVEMHHWC	300
301	IPFSVDGQPA	PSLRWLFNGS	VLNETSFIFT	EFLEPAANET	VRHGCLRLNQ	PTHVNNGNYT	360
361	LLAANPFGQA	SASIMAAFMD	NPF EFNPEDP	IPVSFSPVDT	NSTSGDPVEK	KDETPFGVSV	420
421	AVGLAVFACL	FLSTLLLVLN	KCGRRNKFGI	NRPAVLAPED	GLAMSLHFMT	LGSSLSPTGE	480
481	GKSGLQGHII	IENPQYFSDA	CVHHIKRRDI	VLKWELGEGA	FGKVFLAECH	NLLPEQDKML	540
541	VAVKALKEAS	ESARQDFQRE	AELLTMLQHQ	HIVRFFGVCT	EGRPLLMVFE	YMRHGDLNRF	600
601	LRSHGPDAKL	LAGGEDVAPG	PLGLGQLLAV	ASQVAAGMVY	LAGLHFVHRD	LATRNCLVGGQ	660
661	GLVVKIGDFG	MSRDIYSTDY	YRVGGRTMLP	IRWMPPE S ILY	YRKFTTESDV	WSFGVVLWEI	720
721	FTYGKQPWYQ	LSNTEAIDCI	TQGRELERPR	ACPPEVYAIM	RGCWQREPQQ	RHSIKDVHAR	780
781	LQALAQAPPV	YLDVLG					840

blue: TRK-A sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_002520.2