

ProQinase™ TYRO3

TYRO3 protein tyrosine kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: TYRO3

Synonyms: Brt, Dtk, Etk-2, Rek, Sky, Tif

Product No.: 0449-0000-1

Lot: 001

Description: Human TYRO3, C-terminal fragment, amino acids R₄₅₂-C₈₉₀ (as in [NCBI/Protein](#) entry NP_006284.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: TYRO3 Lot 001, was confirmed as TYRO3 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 78,384 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 100 mM NaCl, 5 mM DTT, 4 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!

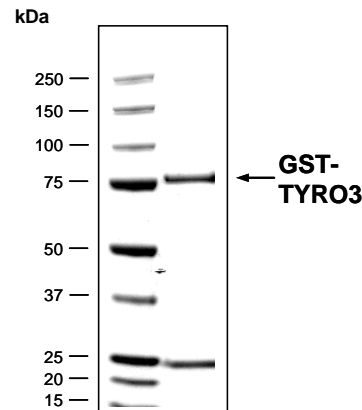
Protein concentration: 0.086 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:
Specific kinase activity (P_i transfer): 129 pmol/µg × min
ATP-K_M: 3.8 µM

Additional assay technology:

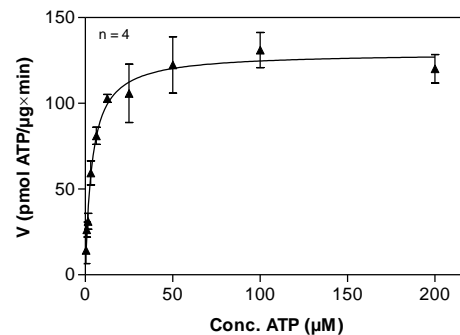
TYRO3 Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

**TYRO3 Lot 001:
Coomassie stain**



2.0 µg GST-TYRO3

**TYRO3 Lot 001:
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}, 20 µg/ml
 - Kinase: 4 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

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GST-TYRO3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRKRRK	ETFRGQAFDS	VMARGEPAVH	FRAARSFNRE	RPERIEATLD	300
301	SLGISDELKE	KLEDVLIPEQ	QFTLGRMLGK	GEFGSVREAQ	LKQEDGSFVK	VAVKMLKADI	360
361	IASSDIEEFL	REAACMKEFD	HPHVAKLVGV	SLRSRAKGRL	PIPMVILPFM	KHGDLHAFLL	420
421	ASRIGENPFN	LPLQTLIRFM	VDIACGMEYL	SSRNFIHRDL	AARNCMLAED	MTVCVADFG	480
481	SRKIYSGDYY	RQGCASKLPV	KWLALESAD	NLYTVQSDVW	AFGVTMWEIM	TRGQTPYAGI	540
541	ENAEIYNYLI	GGNRLKQPPE	CMEDVYDLMY	QCWSADPKQR	PSFTCLRMEL	ENILGQLSVL	600
601	SASQDPLYIN	IERAEEPTAG	GSLELPGRDQ	PYSGAGDGS	MGAVGGTSPD	CRYILTGGGL	660
661	AEQPGQAEHQ	PESPLNETQR	LLLLQGLLP	HSSC			720

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: TYRO3 fragment

TYRO3 wt ¹ Amino Acid Sequence							
1	MALRRSMGRP	GLPPLPLPPP	PRLGLLLAAL	ASLLLPESAA	AGLKLMPGAPV	KLTVSQGQPV	60
61	KLNCVSEGM	EPDIQWVKDG	AVVQNLDQLY	IPVSEQHWIG	FLSLKSVERS	DAGRYWCQVE	120
121	DGGETEISQP	VWLTVEGVPF	FTVEPKDLAV	PPNAPFQLSC	EAVGPPPEVT	IVWWRGTTKI	180
181	GGPAPSPSVL	NVTGVTQSTM	FSCEAHNLKG	LASSRTATVH	LQALPAAPFN	ITVTKLSSSN	240
241	ASVAMPGAD	GRALLQSCTV	QVTQAPGGWE	VLAUVVVPVP	FTCLLRDLVP	ATNYSLRVRC	300
301	ANALGPSPYA	DWVPFQTKGL	APASAPQNLH	AIRTDSGLIL	EWEEVIPEAP	LEGPLGPYKL	360
361	SWVQDNGTQD	ELTVEGTRAN	LTGWDPQKDL	IVRVCVSNV	GCGPWSQPLV	VSSHDRAGQQ	420
421	GPPHSRTSWV	PVVLGVLTA	VTAAALALIL	LKRRKRETRF	GQAFDSVMAR	GEPVHFRFAA	480
481	RSFNRRERPER	IEATLDSLGI	SDELKEKLED	VLIPEQQFTL	GRMLGKGEFG	SVREAQLKQE	540
541	DGSFVKVAVK	MLKADIIASS	DIEEFLREAA	CMKEFDHPHV	AKLVGVSLSR	RAKRLPIPM	600
601	VILPFMKHGD	LHAFLLASRI	GENPFNLPLQ	TLIRFMVDIA	CGMEYLSSRN	FIHRDLAARN	660
661	CMLAEDMTVC	VADFGLSRKI	YSGDYRQGC	ASKLPVKWLA	LESLADNLYT	VQSDVWAFGV	720
721	TMWEIMTRGQ	TPYAGIENAE	IYNYLIGGNR	LKQPPECMED	VYDLMYQCWS	ADPKQRPSFT	780
781	CLRMELENIL	GQLSVLSASQ	DPLYINIARA	EEPTAGGSLE	LPGRDQPYSG	AGDGS GMGAV	840
841	GGTPSDCRYI	LTPGGLAEQP	GQAEHQPESE	LNETQRLLLL	QQGLLPHSSC		900

blue: TYRO3 sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/NP_006284.2) accession number NP_006284.2