

## ProQinase™ TGFB-R1

transforming growth factor beta receptor 1

Recombinant Human Active Protein Kinase

HGNC Symbol: TGFB-R1

Synonyms: ACVRLK4, ALK5, TBR-i, TBRI

Product No.: 0397-0000-1

Lot: 003

**Description:** Human TGFB-R1, C-terminal fragment, amino acids T<sub>200</sub>-M<sub>503</sub> (as in [NCBI/Protein](#) entry NP\_004603.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** TGFB-R1 Lot 003 was confirmed as TGFB-R1 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 64,168 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, 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!

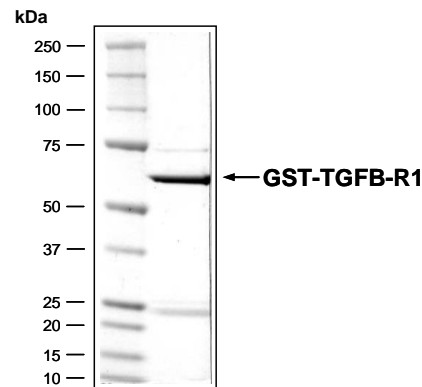
**Protein concentration:** 0.193 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**  
Specific kinase activity (P<sub>i</sub> transfer): 501 pmol/µg × min  
ATP-K<sub>M</sub>: 13 µM

**Additional assay technology:**

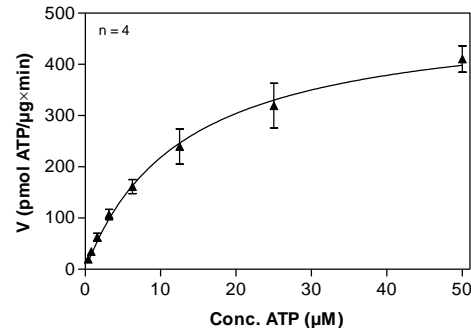
TGFB-R1 Lot 003 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

**TGFB-R1 Lot 003:  
Coomassie stain**



2.0 µg GST-TGFB-R1

**TGFB-R1 Lot 003:  
Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP**



**Determination of K<sub>M</sub> value & Specific activity:**

- 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: Casein, 50 µg/ml
  - Kinase: 0.4 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

## ProQinase™ TGFB-R1

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GST-TGFB-R1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSR TIART	IVLQESIGKG	RFGEVWRGKW	RGEEVAVKIF	SSREERSWFR	300
301	EA EIYQTVML	RHENILGFIA	ADNKDNGTWT	QLWLVS DYHE	HGSLFDY LNR	YTVTVEGMIK	360
361	LALSTASGLA	HLHMEIVGTQ	GKPAIAHRDL	KSKNILVKKN	GTCCIADLGL	AVRHDSATDT	420
421	IDIAPNHRVG	TKRYMAPEVL	DDSINMKHFE	SFKRADIYAM	GLVFWEIARR	CSIGGIHEDY	480
481	QLPYD L VPS	DPSVEEMRKV	VCEQKLRPNI	PNRWQSCEAL	RVMAKIMREC	WYANGAARLT	540
541	ALRIKKTLSQ	LSQOEGIKM					600

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: TGFB-R1 fragment

TGFB-R1 wt <sup>1</sup> Amino Acid Sequence							
1	MEAAVAAPRP	RLLLLV LAAA	AAAAAALLPG	ATALQCFC HL	CTKDNFTCVT	DGLCFVSVTE	60
61	TTDKVIHNSM	CIAEIDLIPR	DRPFV CAPSS	KTGSV TTYC	CNQDHCNKIE	LPTTVKSSPG	120
121	LGPVELAAVI	AGPVCFVCIS	LMLMVIYICHN	RTVIHHRV PN	EEDPSLDRPF	ISEGTTLKDL	180
181	IYDMTTSGSG	SGLPLL VQRT	IARTIVLQES	IGKGRFGEVW	RGKWRGEEVA	VKIFSSREER	240
241	SWFREAEIYQ	TVMLRHENIL	GFIAADNKDN	GTWTQLWLVS	DYHEHGS LFD	YLNRYTVTVE	300
301	GMIKLALSTA	SGLAHLHMEI	VGTQ GKPAIA	HRDLKSKNIL	VKNGTCCIA	DLGLAVRHDS	360
361	ATDTIDIAPN	HRVGTKRYMA	PEVLDD SINM	KHFESFKRAD	IYAMGLV FWE	IARRCSIGGI	420
421	HEDYQLPYD	LVPSPSVEE	MRKV VCEQKL	RPNIPNRWQS	CEALRVMAKI	MRECWYANGA	480
481	ARLTALRIKK	TLSQLSQOEG	IKM				540

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

<sup>1</sup>[NCBI/Protein](#) accession number NP\_004603.1