

## MERTK

MER proto-oncogene, tyrosine kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: MERTK

Synonyms: MER; MER-PEN; RP38; c-mer; mer

Product No.: 0770-0000-1

Lot: 003

**Description:** Human MERTK, C-terminal fragment, amino acids R<sub>528</sub>-M<sub>999</sub> (as in [NCBI/Protein](#) entry NP\_006334.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

**Product identity:** MERTK Lot 007, was confirmed as MERTK by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 81,491 Da

**Expression host:** Sf9 insect cells/E.coli

**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:** 0.065 µg/µl

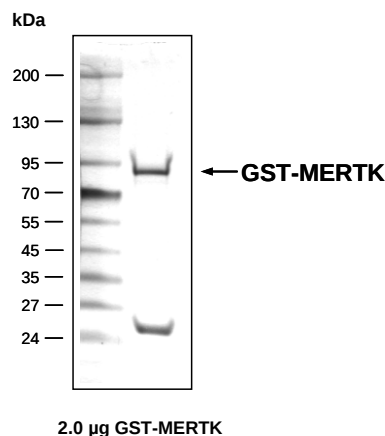
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### Biochemical Parameters:

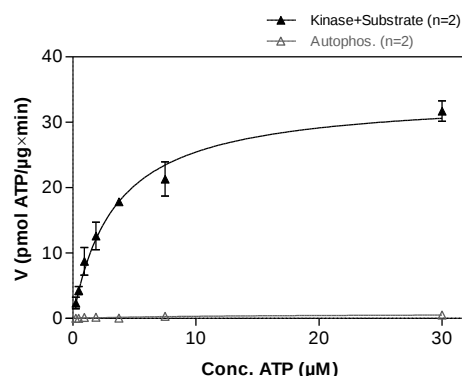
Specific kinase activity (P<sub>i</sub> transfer): 31 pmol/µg × min

ATP-K<sub>M</sub>: 2.9 µM

### MERTK Lot 003: Coomassie stain



### MERTK Lot 003: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



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

### Additional assay technology:

MERTK 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

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| GST-MERTK Recombinant Fusion Protein Amino Acid Sequence |            |            |            |            |            |            |     |
|----------------------------------------------------------|------------|------------|------------|------------|------------|------------|-----|
| 1                                                        | MSPILGYWKI | KGLVQPTRLL | LEYLEEKYEE | HLYERDEGDK | WRNKKFELGL | EFNLPYYID  | 60  |
| 61                                                       | GDVKLTQSMA | IIRYIADKHN | MLGGCPKERA | EISMLEGAVL | DIRYGVSRIA | YSKDFETLKV | 120 |
| 121                                                      | DFLSKLPEML | KMFEDRLCHK | TYLNGDHVTH | PDFMLYDALD | VVLYMDPMCL | DAFPKLVCFK | 180 |
| 181                                                      | KRIEAIQID  | KYLKSSKYIA | WPLQGWQATF | GGGDHPPKSD | PMGHHHHHG  | RDSLEVLFGG | 240 |
| 241                                                      | PLAMLRVQET | KFGNAFTEED | SELVVNYIAK | KSFCRRAIEL | TLHSLGVSEE | LQNKLEDVVI | 300 |
| 301                                                      | DRNLLILGKI | LGEGEFGSVM | EGNLKQEDGT | SLKVAVKTMK | LDNSSQREIE | EFLSEAACMK | 360 |
| 361                                                      | DFSHPNVIRL | LGVCIESSQ  | GIPKPMVILP | FMKYGDLHTY | LLYSRLETGP | KHIPLQTLK  | 420 |
| 421                                                      | FMVDIALGME | YLSNRNFLHR | DLAARNCLMR | DDMTVCVADF | GLSKKIYSGD | YYRQGRIAKM | 480 |
| 481                                                      | PVKWIAIESL | ADRVYTSKSD | VWAFGVTMWE | IATRGMTYP  | GVQNHMYDY  | LLHGHRLKQP | 540 |
| 541                                                      | EDCLDELYEI | MYSCWRTPD  | DRPTFSVLRL | QLEKLLESLE | DVRNQADVY  | VNTQLLESSE | 600 |
| 600                                                      | GLAQGSTLAP | LDLNIDPDSI | IASCTPRAAI | SVVTAEVHDS | KPHEGRYILN | GGSEEWEDLT | 660 |
| 661                                                      | SAPSAAVTAE | KNSVLPGERL | VRNGVSWSHS | SMLPLGSSLP | DELLFADDSS | EGSEVLM    | 720 |

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: MERTK fragment

| MERTK wt <sup>1</sup> Amino Acid Sequence |            |            |             |            |             |            |      |
|-------------------------------------------|------------|------------|-------------|------------|-------------|------------|------|
| 1                                         | MGPAPLPLLL | GLFLPALWRR | AITEAREEAK  | PYPLFGPFP  | GSLQTDHTPL  | LSLPHASGYQ | 60   |
| 61                                        | PALMFSPQTQ | GRPHTGNVAI | PQVTSVESKP  | LPPLAFKHTV | GHIILSEHKG  | VKFNCSISVP | 120  |
| 121                                       | NIYQDTTISW | WKDGKELLGA | HHAITQFYPD  | DEVTAIASF  | SITSVQRSDN  | GSYICKMKIN | 180  |
| 181                                       | NEEIVSDPIY | IEVQGLPHFT | KQPESMNVT   | NTAFNLTCQA | VGPPEPVNIF  | WVQNSSRVNE | 240  |
| 241                                       | QPEKSPSVLT | VPGLTEMAVF | SCEAHNDKGL  | TVSKGVQINI | KAIPSPPTTEV | SIRNSTAHSI | 300  |
| 301                                       | LISWVPGFDG | YSPFRNCISQ | VKEADPLSNG  | SVMIFNTSAL | PHLYQIKQLQ  | ALANYSIGVS | 360  |
| 361                                       | CMNEIGWSAV | SPWILASTE  | GAPSVAPLNV  | TVFLNESSDN | VDIRWMKPPT  | KQQDGELVGY | 420  |
| 421                                       | RISHVWQSAG | ISKELLEEVG | QNGSRARISV  | QVHNATCTVR | IAAVTRGGVG  | PFSDPVKIFI | 480  |
| 481                                       | PAHGWDYAP  | SSTPAPGNAD | PVLIIIFGCFC | GFILIGLILY | ISLAIRKRVQ  | ETKFGNAFTE | 540  |
| 541                                       | EDSELVVNYI | AKKSFRRAI  | ELTLHSLGVS  | EELQNKLEDV | VIDRNLLILG  | KILGEGEFGS | 600  |
| 600                                       | VMENGLKQED | GTSLKVAVKT | MKLDNSSQRE  | IEEFLSEAC  | MKDFSHPNVI  | RLLGVCIEMS | 660  |
| 661                                       | SQGIPKPMVI | LPFMKYGDH  | TYLLYSRLET  | GPKHIPLQTL | LKFMVDIALG  | MEYLSNRNFL | 720  |
| 721                                       | HRDLAARNCM | LRDDMTVCVA | DFGLSKKIYS  | GDYYRQGRIA | KMPVKWIAIE  | SLADRVYTSK | 780  |
| 781                                       | SDVWAFGVTM | WEIATRGMT  | YPGVQNHMY   | DYLLHGHRLK | QPEDCLDELY  | EIMYSCWRTP | 840  |
| 841                                       | PLDRPTFSVL | RLQLEKLLES | LPDVRNQADV  | IYVNTQLLES | SEGLAQGSTL  | APLDLNIDPD | 900  |
| 901                                       | SIIASCTPRA | AISVVTAEVH | DSKPHEGRYI  | LNGGSEEWED | LTSAPSAAVT  | AEKNSVLPGE | 960  |
| 961                                       | RLVRNGVSW  | HSSMLPLGSS | LPDELLFADD  | SSEGSEVLM  |             |            | 1020 |

blue: MERTK sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_006334.2

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