

Certificate of Analysis



MERTK

c-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 R₅₂₈-M₉₉₉ (as in NCBI/Protein entry NP_006334.2), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

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

Theoretical MW_{Fusion Protein}: 81,491 Da

Expression: Baculovirus infected Sf9 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: 0.065 µg/µl

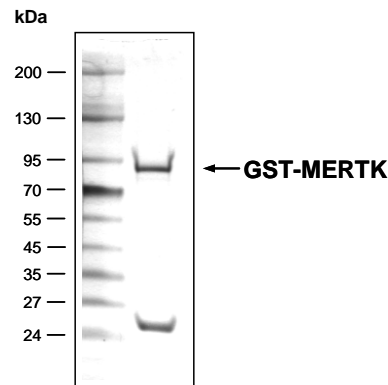
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 31 pmol/µg×min

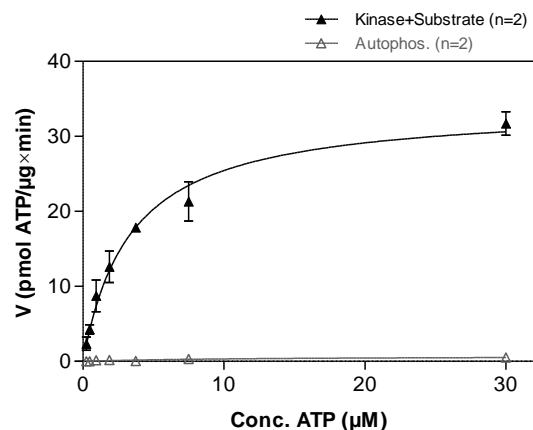
ATP-K_M: 2.9 µM

MERTK Lot 003: Coomassie stain



2.0 µg GST-MERTK

MERTK 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
 - MERTK: 1.0 µg/ml
- Filter binding assay
 - MSFC membrane (Millipore)

Additional assay technology: MERTK Lot 003

was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from



ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

MERTK

Product No.: 0770-0000-1

MERTK Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	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	PMG HHHHHG	RDS LEVLFGQ	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	IATRGMTPYP	GVQNHMYDY	LLHGHRKQF	540
541	EDCLDELYEI	MYSCWRDPL	DRPTFSVLR	QLEKLLLESLP	DVRNQADVIY	VNTQLLESSE	600
600	GLAQGSTLAP	LDLNIDPSI	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 ¹ amino acid sequence							
1	MGPAPLPLLL	GLFLPALWRR	AITEAREEAK	PYPLFPGFPF	GSLQTDHTPL	LSLPHASGYQ	60
61	PALMFSTQP	GRPHTGNVAI	PQVTSVESKP	LPPLAFKHTV	GHIILSEHKG	VKFNCSISVP	120
121	NIYQDTTISW	WKDGKELLGA	HHAITQFYDP	DEVTAIIASF	SITSVQRSDN	GSYICKMKIN	180
181	NEEIVSDPIY	IEVQGLPHFT	KQPESMNVTR	NTAFNLTCQA	VGPPEPVNIF	WVQNSSRVNE	240
241	QPEKSPSVLT	VPGLTEMAVF	SCEAHNDKGL	TVSKGVQINI	KAIPSPPEV	SIRNSTAHSI	300
301	LISWVPGFDG	YSPFRNCISQ	VKEADPLSNG	SVMIFNTSAL	PHLYQIKQLQ	ALANYSIGVS	360
361	CMNEIGWSAV	SPWILASTE	GAPSVAPLNV	TVFLNESSDN	VDIRWMKPPT	KQDDELGVY	420
421	RISHVQSAG	ISKELLEEVG	QNGSRARISV	QVHNATCTVR	IAAVTRGGVG	PFSDPVKIFI	480
481	PAHGWVDYAP	SSTPAPGNAD	PVLIIFGCFC	GFILIGLILY	ISLAIRKRVQ	ETKFGNAFTE	540
541	EDSELVVNYI	AKKSFERRAI	ELTLHSLGVS	EELQNKLEDV	VIDRNLLILG	KILGEGEFGS	600
600	VMEGNLQED	GTSLKVAVKT	MKLDNSSQRE	IEEFLSEAAC	MKDFSHPNVI	RLLGVCIEMS	660
661	SQGIPKPMVI	LPFMKYGLH	TYLLYSRLET	GPKHIPLQTL	LKFMVDIALG	MEYLSNRNFL	720
721	HRDLAARNCM	LRDDMTVCVA	DFGLSKKIYS	GDYYRQGRIA	KMPVKWIAIE	SLADRVYTSK	780
781	SDVWAFGVTM	WEIATRGMTP	YPGVQNHMY	DYLLHGHRLK	QPEDCLDELY	EIMYSCWRD	840
841	PLDRPTFSVL	RLQLEKLES	LPDVRNQADV	IYVNTQLLES	SEGLAQGSTL	APLDLNIDPD	900
901	SIIASCTPRA	AISVVTAEVH	DSKPHEGRYI	LNGGSEEWED	LTSAPSAAVT	AEKNSVLPGE	960
961	RLVRNGVSW	HSSMLPLGSS	LPDELLFADD	SSEGSEVLM			1020

blue: MERTK sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_006334.2