Certificate of Analysis

REACTION BIOLOGY

Recombinant Proteins

ProQinase™ MST2

serine/threonine kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: STK3

Synonyms: KRS1

Product No.: 0699-0000-1

Lot: 003

Description: Human MST2, full length, amino acids M_1-F_{491} (as in NCBI/Protein entry NP_006272.2), untagged, expressed in Sf9 insect cells

Product identity: MST2 Lot 003, was confirmed as MST2 by mass spectroscopy LC-ESI-MS/MS

Theoretical $MW_{Fusion\ Protein}$: 56,884 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

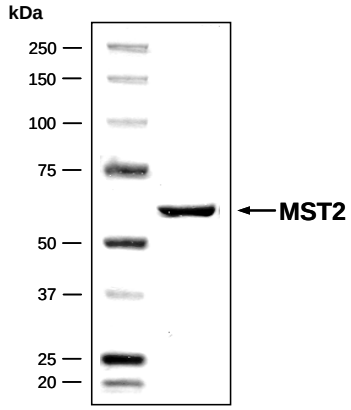
Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20 % glycerol

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

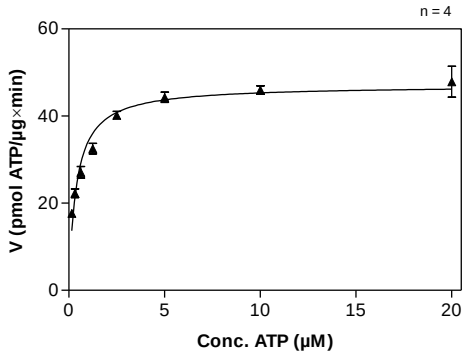
Biochemical Parameters:
Specific kinase activity (P_i transfer): 47 pmol/µg × min
ATP-K_M: 0.38 µM

MST2 Lot 003:
Coomassie stain



2.0 µg MST2

MST2 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 $MgCl_2$
  3 mM $MnCl_2$
  3 µM Na-orthovanadate
  1.2 mM DTT
  50 µg/ml $PEG_{20.000}$
  ATP (variable)
  Substrate: Casein 100 µg/ml
  Kinase: 1 µg/ml
- Filter binding assay

MSFC membrane (Millipore)

Additional assay technology:
MST2 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

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MST2 Recombinant Fusion Protein Amino Acid Sequence

1	GPLAML**MEQP PAPKSKLKKL SEDSLTKQPE EVFDVLEKLG EGSYGSVFKA IHKESGQVVA**	60
61	**IKQVPVESDL QEIIKEISIM QQCDSPYVVK YYGSYFKNTD LWIVMEYCGA GSVSDIIRLR**	120
121	**NKTLIEDEIA TILKSTLKGL EYLHFMRKIH RDIKAGNILL NTEGHAKLAD FGVAGQLTDT**	180
181	**MAKRNTVIGT PFWMAPEVIQ EIGYNCVADI WSLGITSIEM AEGKPPYADI HPMRAIFMIP**	240
241	**TNPPPTFRKP ELWSDDFTDF VKKCLVKNPE QRATATQLLQ HPFIKNAKPV SILRDLITEA**	300
301	**MEIKAKRHEE QQRELEEEEE NSDEDELDSH TMVKTSVESV GTMRATSTMS EGAQTMIEHN**	360
361	**STMLESDLGT MVINSEDEEE EDGTMKRNAT SPQVQRPSFM DYFDKQDFKN KSHENCNQNM**	420
421	**HEPFPMSKNV FPDNWKVPQD GDFDFLKNLS LEELQMRLKA LDPMMEREIE ELRQRYTAKR**	480
481	**QPILDAMDAK KRRQQNF**	540

1-6: legacy of tag cleavage **blue**: MST2

MST2 wt[1] Amino Acid Sequence

1	**MEQPPAPKSK LKKLSEDSLT KQPEEVFDVL EKLGEGSYGS VFKAIHKESG QVVAIKQVPV**	60
61	**ESDLQEIIKE ISIMQQCDSP YVVKYYGSYF KNTDLWIVME YCGAGSVSDI IRLRNKTLIE**	120
121	**DEIATILKST LKGLEYLHFM RKIHRDIKAG NILLNTEGHA KLADFGVAGQ LTDTMAKRNT**	180
181	**VIGTPFWMAP EVIQEIGYNC VADIWSLGIT SIEMAEGKPP YADIHPMRAI FMIPTNPPPT**	240
241	**FRKPELWSDD FTDFVKKCLV KNPEQRATAT QLLQHPFIKN AKPVSILRDL ITEAMEIKAK**	300
301	**RHEEQQRELE EEEENSDEDE LDSHTMVKTS VESVGTMRAT STMSEGAQTM IEHNSTMLES**	360
361	**DLGTMVINSE DEEEEDGTMK RNATSPQVQR PSFMDYFDKQ DFKNKSHENC NQNMHEPFPM**	420
421	**SKNVFPDNWK VPQDGDFDFL KNLSLEELQM RLKALDPMME REIEELRQRY TAKRQPILDA**	480
481	**MDAKKRRQQN F**	540

blue: MST2 sequence expressed in recombinant protein

[1]NCBI/Protein accession number NP_006272.2

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