

ProQinase™ ZAP70

zeta chain of T cell receptor associated protein kinase 70

Recombinant Human Active Protein Kinase

HGNC Symbol: ZAP70

Synonyms: SRK; STD; TZK; ZAP-70

Product No.: 0364-0000-1

Lot: 002

Description: Human ZAP70, full length, amino acids M₁-A₆₁₉ (as in [NCBI/Protein](#) entry NP_001070.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: ZAP70 Lot 002 was confirmed as ZAP70 by specific Western Blotting

Theoretical MW_{Fusion Protein}: 99,496 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: 0.263 µg/µl

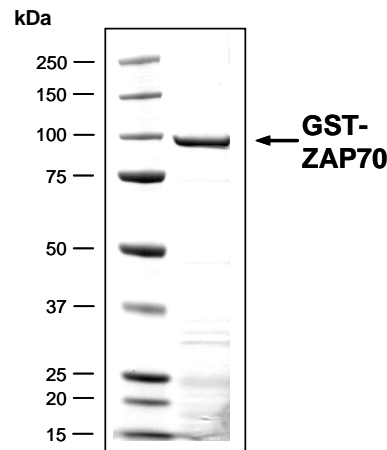
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 76 pmol/µg × min

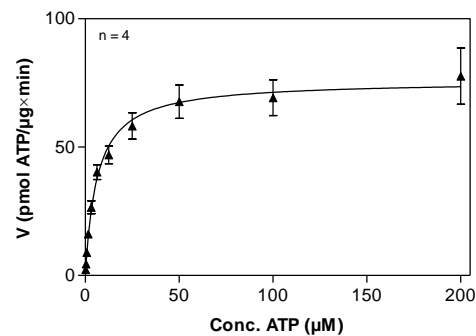
ATP-K_M: 6.3 µM

**ZAP70 Lot 002:
Coomassie stain**



2.0 µg GST-ZAP70

**ZAP70 Lot 002:
Determination of V_{max} and K_M value for ATP**



- 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
ZAP70: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

Additional assay technology:

ZAP70 Lot 002 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

ProQinase™ ZAP70

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GST-ZAP70 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	GIYADPGAMP	DPA AHL PFFY	GSISR AEAE	HLKLAGMADG	LFLLRQCLRS	300
301	LGGYVLSLVH	DVRFHHPFIE	RQLNGTYAIA	GKKAHCGPAE	LCEFYSRDPD	GLPCNLKPC	360
361	NRPSGLEPQP	GVFDCLRDAM	VRDYVRQTKW	LEGEALEQAI	ISQAPQVEKL	IATTAHERMP	420
421	WYHSSLTREE	AERKLYSGAQ	TDGKFLLRPR	KEQGTYALSL	IYGKTVYHYL	ISQDKAGKYC	480
481	IPEGTKFDTL	WQLVEYLKLK	ADGLIYCLKE	ACPNSSASNA	SGAAAPTLP	HPSTLTHPQR	540
541	RIDTLNSDGY	TPEPARITSP	DKPRPMPMDT	SVYESPYSDP	EELKDKLFL	KRDNLLIADI	600
601	ELGCGNFGSV	RQGVYRMRK	QIDVAIKVLK	QGTEKADTEE	MMREAQIMHQ	LDNPYIVRLI	660
661	GVCQAEALML	VMEMAGGGPL	HKFLVGKREE	IPVSNVAELL	HQVSMGMKYL	EEKNFVHRDL	720
721	AARNVLLVNR	HYAKISDFGL	SKALGADDSY	YTARSAGKWP	LKWYAPECIN	FRKFSSRSRV	780
781	WSYGVTMWEA	LSYGQKPKYK	MKGPEVMAFI	EQQRMECPP	ECPPELYALM	SDCWYKWED	840
841	RPDFLTVEQR	MRACYYSLAS	KVEGPPGSTQ	KAEAACA			900

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: ZAP70

ZAP70 wt ¹ Amino Acid Sequence							
1	MPDPAHLPF	FYGSISR AEA	EEHLKLAGMA	DGLFLLRQCL	RSLGGYVLSL	VHDVRFHHFP	60
61	IERQLNGTYA	IAGGKAHCGP	AELCEFYSRD	PDGLPCNLRK	PCNRPSGLEP	QPGVFDCLRD	120
121	AMVRDYVRQT	WKLEGEALEQ	AIISQAPQVE	KLIATTAHER	MPWYHSSLTR	EEAERKLYSG	180
181	AQTDGKFLLR	PRKEQGTYAL	SLIYGKTVYH	YLISQDKAGK	YCIPEGTKFD	TLWQLVEYLK	240
241	LKADGLIYCL	KEACPNSSAS	NASGAAAPT	PAHPSTLTHP	QRRIDTLNSD	GYTPEPARIT	300
301	SPDKPRPMP	DTSVYESPYS	DPEELKDKKL	FLKRDNLLIA	DIELGCGNFG	SVRQGVYRMR	360
361	KKQIDVAIKV	LKQTEKADT	EEMREAQIM	HQLDNPYIVR	LIGVCQAEAL	MLVMEMAGGG	420
421	PLHKFLVGKR	EEIPVSNVAE	LLHQVSMGMK	YLEEKNFVHR	DLAARNVLLV	NRHYAKISDF	480
481	GLSKALGADD	SYTARSAGK	WPLKWYAPEC	INFRKFSSRS	DVWSYGVTMW	EALSYGQKPY	540
541	KKMKGPEVMA	FIEQQRMEC	PPECPELYA	LMSDCWIYKW	EDRPDLTVE	QRMRCYYSL	600
601	ASKVEGPPGS	TQKAEAACA					660

blue: ZAP70 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001070.2