

## CDC42BPB

CDC42 binding protein kinase beta

Recombinant Human Active Protein Kinase

HGNC Symbol: CDC42BPB

Synonyms: MRCKB, DMPK-like

Product No.: 0382-0000-1

Lot: 001

**Description:** Human CDC42BPB, N-terminal fragment, amino acids M<sub>1</sub>-H<sub>472</sub> (as in [NCBI/Protein](#) entry NP\_006026.2), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** CDC42BPB Lot 001, was confirmed as CDC42BPB by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW<sub>Fusion Protein</sub>:** 84,444 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:** 0.205 µg/µl

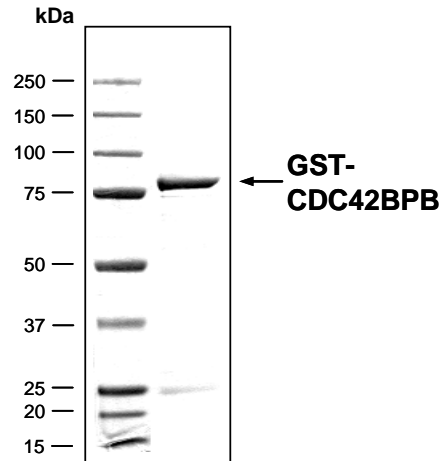
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 14 pmol/µg × min

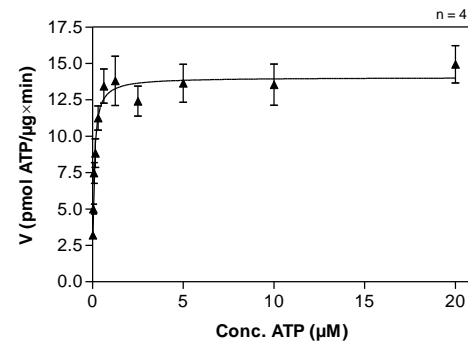
ATP-K<sub>M</sub>: 0.1 µM

### CDC42BPB Lot 001: Coomassie stain



2.0 µg GST-CDC42BPB

### CDC42BPB Lot 001: 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: INSRRTide 20 µg/ml
  - Kinase: 1 µg/ml
- Filter binding assay
  - MSPH membrane (Millipore)

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## CDC42BPB

Product No.: 0382-0000-1

GST-CDC42BPB Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	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	<b>LVPRG</b> PGLD	GIYARGIQAS	<b>MSAKVRLKKL</b>	<b>EQLLLDGPWR</b>	<b>NESALSVETL</b>	<b>LDVLVCLYTE</b>	300
301	<b>CSHSALRRDK</b>	<b>YVAEFLEWAK</b>	<b>PFTQLVKEMQ</b>	<b>LHREDFEIIK</b>	<b>VIGRGAFGEV</b>	<b>AVVKMKNTER</b>	360
361	<b>IYAMKILNKW</b>	<b>EMLKRAETAC</b>	<b>FREERDVLVN</b>	<b>GDCQWITALH</b>	<b>YAFQDENHLY</b>	<b>LVMDYYVGGD</b>	420
421	<b>LLTLLSKFED</b>	<b>KLPEDMARFY</b>	<b>IGEMVLAIDS</b>	<b>IHQHLYVHRD</b>	<b>IKPDNVLLDV</b>	<b>NGHIRLADFG</b>	480
481	<b>SCLKMND DGT</b>	<b>VQSSVAVGTP</b>	<b>DYISPEILQA</b>	<b>MEDGMGKYGP</b>	<b>ECDWWSL GVC</b>	<b>MYEMLYGETP</b>	540
541	<b>FYAESLVET Y</b>	<b>GKIMNHEERF</b>	<b>QFP SHVTDVS</b>	<b>EEAKDLIQRL</b>	<b>ICSRERRL GQ</b>	<b>NGIEDFKKHA</b>	600
601	<b>FFEGLN WENI</b>	<b>RNLEAPYIPD</b>	<b>VSSP SDT SNF</b>	<b>DVDD DVLRNT</b>	<b>EILPPG SHTG</b>	<b>FSGLHLP FFI G</b>	660
661	<b>FTFTTESCF S</b>	<b>DRGSLK SIMQ</b>	<b>SNTLT KDEDV</b>	<b>QRDL EHS LQM</b>	<b>EAYERR I RRL</b>	<b>EQEKLELSRK</b>	720
721	<b>LQESTQT VQS</b>	<b>LH</b>					780

1-218: GST **Red:** HIS6-tag **Pink:** Thrombin cleavage site **blue:** CDC442BPB fragment

CDC42BPB wt <sup>1</sup> Amino Acid Sequence							
1	<b>MSAKVRLKKL</b>	<b>EQLLLDGPWR</b>	<b>NESALSVETL</b>	<b>LDVLVCLYTE</b>	<b>CSHSALRRDK</b>	<b>YVAEFLEWAK</b>	60
61	<b>PFTQLVKEMQ</b>	<b>LHREDFEIIK</b>	<b>VIGRGAFGEV</b>	<b>AVVKMKNTER</b>	<b>IYAMKILNKW</b>	<b>EMLKRAETAC</b>	120
121	<b>FREERDVLVN</b>	<b>GDCQWITALH</b>	<b>YAFQDENHLY</b>	<b>LVMDYYVGGD</b>	<b>LLTLLSKFED</b>	<b>KLPEDMARFY</b>	180
181	<b>IGEMVLAIDS</b>	<b>IHQHLYVHRD</b>	<b>IKPDNVLLDV</b>	<b>NGHIRLADFG</b>	<b>SCLKMND DGT</b>	<b>VQSSVAVGTP</b>	240
241	<b>DYISPEILQA</b>	<b>MEDGMGKYGP</b>	<b>ECDWWSL GVC</b>	<b>MYEMLYGETP</b>	<b>FYAESLVET Y</b>	<b>GKIMNHEERF</b>	300
301	<b>QFP SHVTDVS</b>	<b>EEAKDLIQRL</b>	<b>ICSRERRL GQ</b>	<b>NGIEDFKKHA</b>	<b>FFEGLN WENI</b>	<b>RNLEAPYIPD</b>	360
361	<b>VSSP SDT SNF</b>	<b>DVDD DVLRNT</b>	<b>EILPPG SHTG</b>	<b>FSGLHLP FFI G</b>	<b>FTFTTESCF S</b>	<b>DRGSLK SIMQ</b>	420
421	<b>SNTLT KDEDV</b>	<b>QRDL EHS LQM</b>	<b>EAYERR I RRL</b>	<b>EQEKLELSRK</b>	<b>LQESTQT VQS</b>	<b>LHGSSRALS N</b>	480
481	<b>SNRDKEIKKL</b>	<b>NEEIERLKNK</b>	<b>IADSNRLERQ</b>	<b>LEDTVALRQE</b>	<b>REDSTQRLRG</b>	<b>LEKQHRVVRQ</b>	540
541	<b>EKEELHKQLV</b>	<b>EASERLKSQA</b>	<b>KELKDAHQQR</b>	<b>KLALQEFSEL</b>	<b>NERMAELRAQ</b>	<b>KQKVSRLRD</b>	600
601	<b>KEEEME VATQ</b>	<b>KVDAMRQEMR</b>	<b>RAEKLRKELE</b>	<b>AQLDDAVAEA</b>	<b>SKERKLREHS</b>	<b>ENFCKQMESE</b>	660
661	<b>LEALKVKQGG</b>	<b>RGAGATLEHQ</b>	<b>QEISKIKSEL</b>	<b>EKKVLFYEEE</b>	<b>LVRREASHVL</b>	<b>EVKNVKKVEVH</b>	720
721	<b>DSESHQLALQ</b>	<b>KEILMLKDKL</b>	<b>EKSKRERHNE</b>	<b>MEEAVGTIKD</b>	<b>KYERERAMLF</b>	<b>DENKKLT AEN</b>	780
781	<b>EKLCSFVDKL</b>	<b>TAQNRQLEDE</b>	<b>LQDLA AKKES</b>	<b>VAHWEAQIAE</b>	<b>IIQWVSDEKD</b>	<b>ARGYLQALAS</b>	840
841	<b>KMTEELEALR</b>	<b>SSSLGSR TLD</b>	<b>PLWKVRRSQK</b>	<b>LDMSARLELQ</b>	<b>SALEAEIRAK</b>	<b>QLVQEE LRKV</b>	900
901	<b>KDANLTLESK</b>	<b>LKDSEAKNRE</b>	<b>LLEEMEILKK</b>	<b>KMEEKFRADT</b>	<b>GLKLPDFQDS</b>	<b>IFEYFNTAPL</b>	960
961	<b>AHDLTFR TSS</b>	<b>ASEQETQAPK</b>	<b>PEASPSMSVA</b>	<b>ASEQQEDMAR</b>	<b>PPQRPSAVPL</b>	<b>PTTQALALAG</b>	1020
1021	<b>PKPKAHQFSI</b>	<b>KSFSSPTQCS</b>	<b>HCTSLMVGLI</b>	<b>RQGYACEVCS</b>	<b>FACHVSCKD G</b>	<b>APQVCPIPPE</b>	1080
1081	<b>QSKRPLGVDV</b>	<b>QRGIGTAYKG</b>	<b>HVKVPKPTGV</b>	<b>KKGWQRAYAV</b>	<b>VCECKLFLYD</b>	<b>LPEGKSTQPG</b>	1140
1141	<b>VIASQVLDLR</b>	<b>DDEFSVSSVL</b>	<b>ASDVIHATR</b>	<b>DIPCIFRVTA</b>	<b>SLLGAPSKTS</b>	<b>SLLILTENEN</b>	1200
1201	<b>EKRKVGWGLE</b>	<b>GLQSILHKNR</b>	<b>LRNQVVHVPL</b>	<b>EAYDSSLPLI</b>	<b>KAILTAAIVD</b>	<b>ADRIAVGLEE</b>	1260
1261	<b>GLYVIEVTRD</b>	<b>VIVRAADCKK</b>	<b>VHQIELAPRE</b>	<b>KIVILLCGRN</b>	<b>HHVHLYPWSS</b>	<b>LDGAEGSFDI</b>	1320
1321	<b>KLPETKGCQL</b>	<b>MATATLKRNS</b>	<b>GTCLFVAVKR</b>	<b>LILCYEIQRT</b>	<b>KPFHRKFNEI</b>	<b>VAPGSVQCLA</b>	1380
1381	<b>VLRDRLCVGY</b>	<b>PSGFCLLSIQ</b>	<b>GDGQPLNLVN</b>	<b>PNDPSLAFLS</b>	<b>QQSFDALCAV</b>	<b>ELESEEYLLC</b>	1440
1441	<b>FSHMGLYVDP</b>	<b>OQRRARAQEL</b>	<b>MWPAAPVACS</b>	<b>CSPTHVTVYS</b>	<b>EYGVDFVDVR</b>	<b>TMEWVQTIGL</b>	1500
1501	<b>RRIRPLNSEG</b>	<b>TLNLLNCEPP</b>	<b>RLIYFKSKFS</b>	<b>GAVLNVPTS</b>	<b>DNSKKQMLRT</b>	<b>RSKRRFVFKV</b>	1560
1561	<b>PEEERLQQR</b>	<b>EMLRDPELRS</b>	<b>KMISNPTNFN</b>	<b>HVAHMGPGDG</b>	<b>MQVLM DPLS</b>	<b>AVPPSQEERP</b>	1620
1621	<b>GPAPTNLARQ</b>	<b>PPSRNKPYIS</b>	<b>WPSSGGSEPS</b>	<b>VTVPLRSMDS</b>	<b>PDQDFDKEPD</b>	<b>SDSTKHSTPS</b>	1680
1681	<b>NSSNPSGPPS</b>	<b>PNSPHRSQLP</b>	<b>LEGLEQPACD</b>	<b>T</b>			1740

**blue:** CDC42BPB sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_006026.2