Certificate of Analysis

ProQinase TARGETING CANCER

AKT2 aa1-481

AKT serine/threonine kinase 2

Recombinant Human Active Protein Kinase

HGNC Symbol: AKT2

Synonyms: PKBB, PKBBETA, PKB beta, PRKBB, RAC-BETA, RAC-PK-beta

Product No.: 1577-0000-1

Lot: 003

Description: Human AKT2, full length, amino acids M_1-E_{481} (as in NCBI/Protein entry NP_001617.1), N-terminal GST-HIS_6 fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: AKT2 Lot 002, was confirmed as AKT2 by mass spectroscopy LC-ESI-MS/MS

Theoretical $MW_{Fusion\ Protein}$: 84,273 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: With PDK1

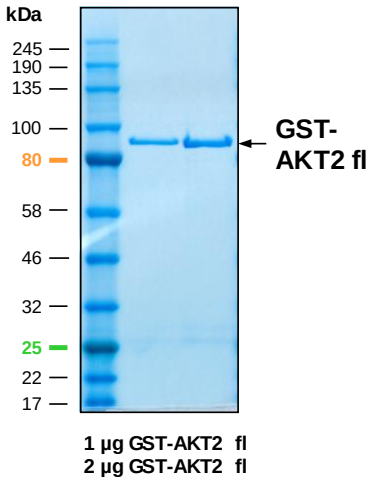
Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20 % glycerol

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!

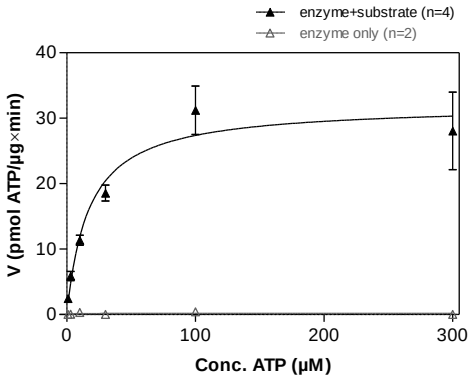
Protein concentration: 0.471 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:
Specific kinase activity (P_i transfer): 32 pmol/µg × min
ATP-K_M: 17 µM

AKT2 aa1-481 Lot003:
Coomassie stain



AKT2 aa1-481 Lot003:
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: GSK3-derived peptide 100 µg/ml
Kinase: 1 µg/ml
• Filter binding assay
MSPH membrane (Millipore)

Recombinant Proteins

ProQinase
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AKT2 aa1-481

Product No.: 1577-0000-1

GST-AKT2 aa1-481 Recombinant Fusion Protein Amino Acid Sequence

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  1  MSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID  60
 61  GDVKLTQSMA IIRYIADKHN MLGGCPKERA EISMLEGAVL DIRYGVSRIA YSKDFETLKV 120
121  DFLSKLPEML KMFKDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK 180
181  KRIEAIPQID KYLKSSKYIA WPLQGWQATF GGGDHPPKSD PMGHHHHHHG RDSLEVLFQG 240
241  PLAMVMNEVS VIKEGWLHKR GEYIKTWRPR YFLLKSDGSF IGYKERPEAP DQTLPPLNNF 300
301  SVAECQLMKT ERPRPNTFVI RCLQWTTVIE RTFHVDSPDE REEWMRAIQM VANSLKQRAP 360
361  GEDPMDYKCG SPSDSSTTEE MEVAVSKARA KVTMNDFDYL KLLGKGTFGK VILVREKATG 420
421  RYYAMKILRK EVIIAKDEVA HTVTESRVLQ NTRHPFLTAL KYAFQTHDRL CFVMEYANGG 480
481  ELFFHLSRER VFTEERARFY GAEIVSALEY LHSRDVVYRD IKLENLMLDK DGHIKITDFG 540
541  LCKEGISDGA TMKTFCGTPE YLAPEVLEDN DYGRAVDWWG LGVVMYEMMC GRLPFYNQDH 600
601  ERLFELILME EIRFPRTLSP EAKSLLAGLL KKDPKQRLGG GPSDAKEVME HRFFLSINWQ 660
661  DVVQKKLLPP FKPQVTSEVD TRYFDDEFTA QSITITPPDR YDSLGLLELD QRTHFPQFSY 720
721  SASIRE                                                            780
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1-218: GST **Red**: HIS6-tag **Green**: 3C cleavage site **blue**: AKT2

AKT2 wt[1] Amino Acid Sequence

```
  1  MNEVSVIKEG WLHKRGEYIK TWRPRYFLLK SDGSFIGYKE RPEAPDQTLP PLNNFSVAEC  60
 61  QLMKTERPRP NTFVIRCLQW TTVIERTFHV DSPDEREEWM RAIQMVANSL KQRAPGEDPM 120
121  DYKCGSPSDS STTEEMEVAV SKARAKVTMN DFDYLKLLGK GTFGKVILVR EKATGRYYAM 180
181  KILRKEVIIA KDEVAHTVTE SRVLQNTRHP FLTALKYAFQ THDRLCFVME YANGGELFFH 240
241  LSRERVFTEE RARFYGAEIV SALEYLHSRD VVYRDIKLEN LMLDKDGHIK ITDFGLCKEG 300
301  ISDGATMKTF CGTPEYLAPE VLEDNDYGRA VDWWGLGVVM YEMMCGRLPF YNQDHERLFE 360
361  LILMEEIRFP RTLSPEAKSL LAGLLKKDPK QRLGGGPSDA KEVMEHRFFL SINWQDVVQK 420
421  KLLPPFKPQV TSEVDTRYFD DEFTAQSITI TPPDRYDSLG LLELDQRTHF PQFSYSASIR 480
481  E                                                                 540
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blue: AKT2 sequence expressed in recombinant protein

[1]NCBI/Protein accession number NP_001617.1

Recombinant Proteins