

## ProQinase™ AKT2 aa107-481

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.:** 0276-0000-2

**Lot:** 003

**Description:** Human AKT2, C-terminal fragment, amino acids A<sub>107</sub>-E<sub>481</sub> (as in [NCBI/Protein](#) entry NP\_001617.1), N-terminal GST-HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** AKT2 Lot 003, was confirmed as AKT2 by specific Western Blotting

**Theoretical MW<sub>Fusion Protein</sub>:** 72,844 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:** 0.367 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

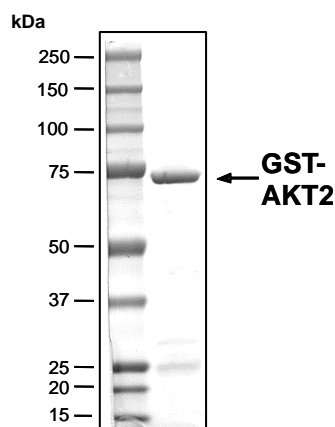
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 272 pmol/µg x min  
ATP-K<sub>M</sub>: 87 µM

### Additional assay technology:

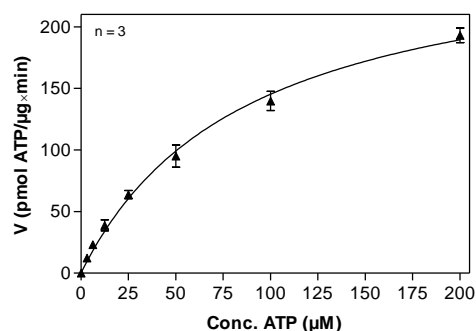
AKT2 Lot 003 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

### AKT2 Lot 003: Coomassie stain



2.0 µg GST-AKT2

### AKT2 Lot 003: 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: GSK3(14-27)tide 100 µg/ml  
Kinase: 2 µg/ml
- Filter binding assay  
MSPH membrane (Millipore)

## ProQinase™ AKT2 aa107-481

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GST-AKT2 aa107-481 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	GICSIIEEFAN	SLKQRAPGED	PMDYKCGSPS	DSSTTEEMEV	AVSKARAKVT	300
301	MNDFDYLLKLL	GKGTFGKVIL	VREKATGRYY	AMKILRKEVI	IAKDEVAHTV	TESRVLQNTR	360
361	HPFLTALKYA	FQTHDRLCFV	MEYANGGELF	FHLSRERVFT	EERARFYGAE	IVSALEYLHS	420
421	RDVVYRDIKL	ENLMLDKDGH	IKITDFGLCK	EGISDGATMK	TFCGTPEYLA	PEVLEDNDYG	480
481	RAVDWWGLGV	VMYEMMCGRL	PFYNQDHERL	FELILMEEIR	FPRTLSPEAK	SLLAGLLKGD	540
541	PKQRLGGGGS	DAKEVMEHRF	FLSINWQDVV	QKLLPPFKP	QVTSEVDTRY	FDDEFTAQSI	600
601	TITPPDRYDS	LGLLELDQRT	HFPQFSYSAS	IRE			660

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: AKT2 fragment

AKT2 wt <sup>1</sup> Amino Acid Sequence							
1	MNEVSVIKEG	WLHKRGEYIK	TWRPRYFLLK	SDGSFIGYKE	RPEAPDQTLF	PLNNFSVAEC	60
61	QLMKTERPRP	NTFVIRCLQW	TTVIERTFHV	DSPDEREEWM	RAIQMVANSI	KQAPGEDPM	120
121	DYKCGSPSDS	STTEEMEVAV	SKARAKVTMN	DFDYLLKLLGK	GTFGKVILVR	EKATGRYYAM	180
181	KILRKEVIAA	KDEVAHTVTE	SRVLQNTRHP	FLTALKYAFQ	THDRLCFVME	YANGGELFFH	240
241	LSRERVFTTE	RARFYGAEIV	SALEYLHSRD	VVYRDIKLEN	LMLDKDGHK	ITDFGLCKEG	300
301	ISDGATMKTF	CGTPEYLAPE	VLEDNDYGRA	VDWWGLGVVM	YEMMCGRLPF	YNQDHERLFE	360
361	LILMEEIRFP	RTLSPEAKSL	LAGLLKDKPK	QRLGGGPSDA	KEVMEHRFFL	SINWQDVVQK	420
421	KLLPPFKPQV	TSEVDTRYFD	DEFTAQSITI	TPPDYDSL	LLELDQRTHE	PQFSYSASIR	480
481	E						540

**blue**: AKT2 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_001617.1