

## AKT1 aa106-480

AKT serine/threonine kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: AKT1

Synonyms: PKB, RAC, PRKBA, RAC-ALPHA

Product No.: 0132-0000-2

Lot: 007

**Description:** Human AKT1, C-terminal fragment, amino acids V<sub>106</sub>-A<sub>480</sub> (as in [NCBI/Protein](#) entry NP\_005154.1), N-terminal GST-HIS<sub>6</sub>, C-terminal HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** AKT1 Lot 007, was confirmed as AKT1 by Western Blotting using a specific anti AKT1 antibody

**Theoretical MW<sub>Fusion Protein</sub>:** 77,832 Da

**Expression host:** Sf9 insect cells

**Purification:** GST-Affinity Chromatography

**Activation:** With PDK1

**Storage buffer:** 50 mM TRIS-HCl pH 8.0, 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:** 0.434 µg/µl

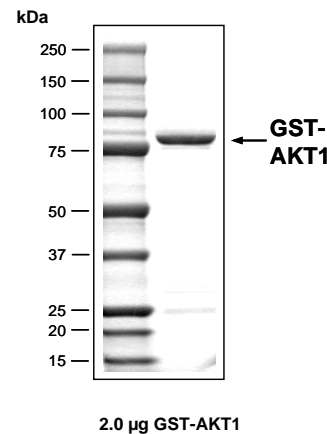
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

**Biochemical Parameters:**

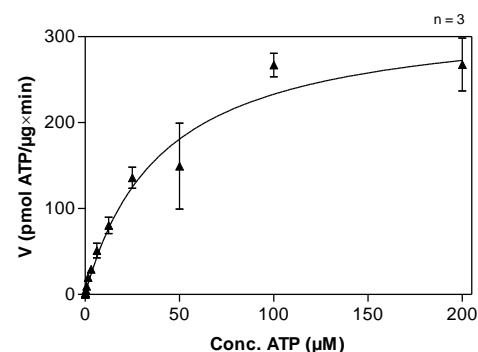
Specific kinase activity (P<sub>i</sub> transfer): 328 pmol/µg × min

ATP-K<sub>M</sub>: 41 µM

**AKT1 aa106-480 Lot 007:  
Coomassie stain**



**AKT1 aa106-480 Lot 007:  
Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP**



**Determination of K<sub>M</sub> value & Specific activity:**

- 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: R<sub>11</sub>-GSK3(14-27), 100 µg/ml
  - AKT1: 2 µg/ml
- Filter binding assay
- MSPH membrane (Millipore)

**Additional assay technology:**

AKT1 aa106-480 Lot 007 was also successfully tested by ProQinase 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

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.

## AKT1 aa106-480

Product No.: 0132-0000-2

GST-AKT1 aa106-480 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRLQGT	PVADGLKKQE	EEEMDFRSGS	PSDNSGAEEM	300
301	EVSLAKPKHR	VTMNEFEYLK	LLGKGTFGKV	ILVKEKATGR	YYAMKILKKE	VIVAKDEVAH	360
361	TLTENRVLQN	SRHPFLTALK	YSFQTHDRLC	FVMEYANGGE	LFFHLSRERV	FSEDRARFYG	420
421	AEIVSALDYL	HSEKNVVYRD	LKLENLMLDK	DGHIKITDFG	LCKEGIKDGA	TMKTFCGTPE	480
481	YLAPEVLEDN	DYGRAVDWWG	LGVVMYEMMC	GRLPFYNQDH	EKLFELILME	EIRFPRTLGP	540
541	EAKSLLSGLL	KKDPKQRLGG	GSEDAKEIMQ	HRFFAGIVWQ	HVYEKLSPP	FKPQVTSETD	600
601	TRYFDEEFTA	QMITITPPDQ	DDSMCEVDSE	RRPHFPQFSY	SASSTAKGEL	RGHPFEGKPI	660
661	PNLLGLDST	RTGHHHHHH					720

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: AKT1 fragment

AKT1 wt <sup>1</sup> Amino Acid Sequence							
1	MSDVAIVKEG	WLHKRGEYIK	TWRPRYFLLK	NDGTFIGYKE	RPQDVDQREA	PLNNFSVAQC	60
61	QLMKTERPRP	NTFIIIRCLQW	TTVIERTFHV	ETPEEREWT	TAIQTVADGL	KKQEEEEEMDF	120
121	RSGSPSDNSG	AEEMEVS LAK	PKHRVTMNEF	EYLKLLGKGT	FGKVILVKEK	ATGRYYAMKI	180
181	LKKEVIVAKD	EVAHTLTENR	VLQNSRHPFL	TALKYSFQTH	DRLCFVMEYA	NGGELFFHLS	240
241	RERVFSEDRA	RFYGA EIVSA	LDYLHSEKNV	VYRDLKLENL	MLDKDGHIKI	TDFGLCKEGI	300
301	KDGATMKTFC	GTPEYLAPEV	LEDNDYGRAV	DWWGLGVVY	EMMCGRLPFY	NQDHEKLFEL	360
361	IIMEEIRFPR	TLGPEAKSL	SGLLKKDPKQ	RLGGGSEDAK	EIMQHRFFAG	IVWQHVEYK	420
421	LSPPFKPQVT	SETDTRYFDE	EFTAQMITIT	PPDQDSMEC	VDSERRPHFP	QFSYSASSTA	480

**blue**: AKT1 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein) accession number NP\_005154.1

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.