

ProQinase™ AKT1 aa1-480 (non activated)

v-akt murine thymoma viral oncogene homolog 1

Recombinant Human Protein Kinase

HGNC Symbol: AKT1

Synonyms: PKB, RAC, PRKBA, RAC-ALPHA

Product No.: 1379-0000-1

Lot: 001

Description: Human AKT1, full length, amino acids M₁-A₄₈₀ (as in NCBI/Protein entry NP_005154.2), non activated N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Theoretical MW_{Fusion Protein}: 81,191 Da

Expression: Baculovirus infected Sf9 cells

Purification: GST-Affinity Chromatography

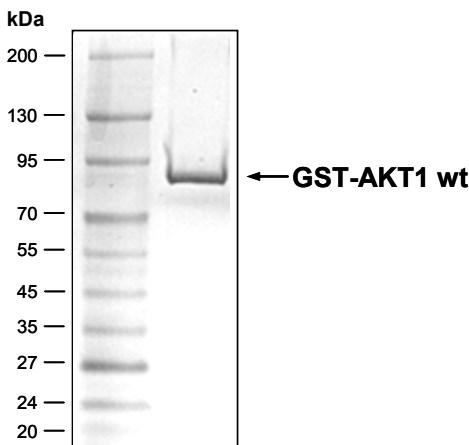
Activation: This kinase was not activated by special procedures

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

Storage temperature: -80°C
Avoid repeated freeze-thaw cycles!

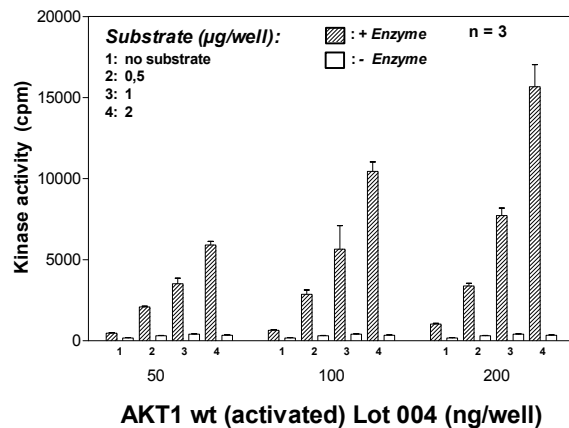
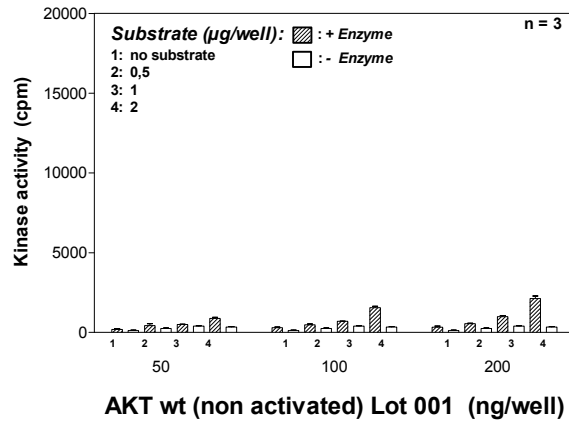
Protein concentration: 0.324 µg/µl (Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Coomassie stain:



2.0 µg GST-AKT1 wt

Kinase activity AKT1 wt (non activated) vs AKT1 wt (activated):



Final assay concentrations:

- 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}
- 1 µM ATP (610,000 cpm ³³P-γ-ATP)
- Substrate (variable): RBER-GSK3
- Recombinant AKT1 wt (non activated) or AKT1 wt (activated), variable kinase amounts

Assay: ³³PanQinase® Assay

Recombinant Proteins

ProQinase™ AKT1 aa1-480 (non activated)

Product No.: 1379-0000-1

Recombinant Proteins

AKT1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQ SMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMGHHHHHG	RDSLEVL FQG	240
241	PLAMVMSDVA	IVKEGWLH KR	GEYIKTWRPR	YFLLKNDGTF	IGYKERPQDV	DQREAPLN NF	300
301	SVAQCQLMKT	ERPRPNTFII	RCLQWTTVIE	RTFHVETPEE	REEWTTAIQT	VADGLKKQEE	360
361	EEMDFRSGSP	SDNSGAEEME	VSLAKPKHRV	TMNEFEYLKL	LKGTGFGKVI	LVKEKATGRY	420
421	YAMKILKKEV	IVAKDEVAHT	LTENRVLQNS	RHPFLTALKY	SFQTHDRLCF	VMEYANGGEL	480
481	FFHLSRERVF	SEDRARFYGA	EIVSALDYLH	SEKNVVYRDL	KLENMLDKD	GHIKITDFGL	540
541	CKEGIKDGAT	MKTFCGTPEY	LAPEVLEDND	YGRAVDWWGL	GVMYEMMCG	RLPFYNQDHE	600
601	KLFELILMEE	IRFPRTLGP E	AKSLLSGLLK	KDPKQRLGGG	SEDAKEIMQH	RFFAGIVWQH	660
661	VYEKKLSPPF	KPQVTSETDT	RYFDEEFTAQ	MITITPPDQD	DSMECVD SER	RPHFPQFSYS	720
721	ASGTA						780

1-218: GST Red: HIS6-tag Green: 3C blue: AKT1

AKT1 wt ¹ amino acid sequence							
1	MSDVAIVKEG	WLH KRGEYIK	TWRPRYFLK	NDGTFIGYKE	RPQDVDQREA	PLN NFSVAQC	60
61	QLMKTERPRP	NTFII RCLQW	TTVIERTFHV	ETPEERE EWT	TAIQT VADGL	KKQEEEE MDF	120
121	RSGSPSDNSG	AEMEVS LAK	PKHRVTMNEF	EYLKLLGKGT	FGKVILVKEK	ATGRYYAMKI	180
181	LKKEVIVAKD	EVAHTLTENR	VLQNSRHPFL	TALKYSFQTH	DRLCFVMEYA	NGGELFFHLS	240
241	RERVFSEDRA	RFYGA EIVSA	LDYLHSEKNV	VYRDLKLENL	MLDKDGH IKI	TDFGLCKEGI	300
301	KDGATMKTFC	GTPEYLAPEV	LEDNDYGRAV	DWWGLGVV MY	EMMCGRLPFY	NQDHEKLFEL	360
361	ILMEEIRFPR	TLGPEAKSLL	SGLLKKDPKQ	RLGGGSEDAK	EIMQHRFFAG	IVWQH VYEKK	420
421	LSPPFKQV T	SETDTRYFDE	EFTAQMITIT	PPDQD SM EC	VDSERRPHFP	QFSYSASGTA	480

blue: AKT1 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_005154.2