

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

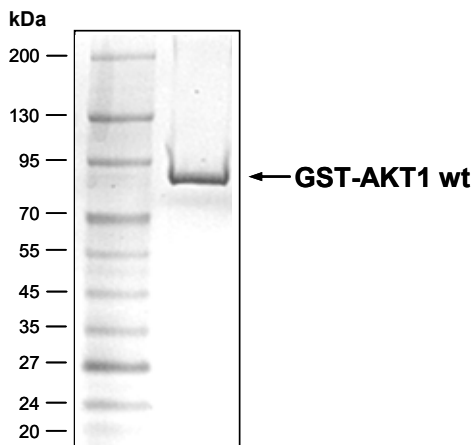
Activation: This kinase was not activated by special procedures

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!

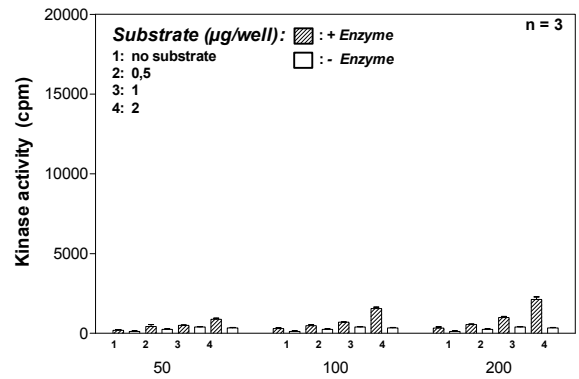
Protein concentration: 0.324 µg/µl (Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Coomassie stain:

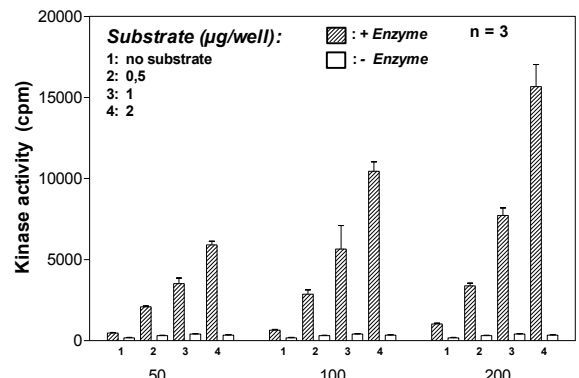


2.0 µg GST-AKT1 wt

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



AKT wt (non activated) Lot 001 (ng/well)



AKT1 wt (activated) Lot 004 (ng/well)

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

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AKT1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPE	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHGG	RDSLEVLFGQ	240
241	PLAMVMSDVA	IVKEGWLHKR	GEYIKTWRPR	YFLLKNDGTF	IGYKERPQDV	DQREAPLNNF	300
301	SVAQCQLMKT	ERPRPNTFII	RCLQWTTVIE	RTFHVETPEE	REEWTTAIQT	VADGLKKQEE	360
361	EEMDFRSGSP	SDNSGAEEME	VSLAKPKHRV	TMNEFEYLKL	LGKGTFGKVI	LVKEKATGRY	420
421	YAMKILKKEV	IVAKDEVAHT	LTENRVLQNS	RHPFLTALKY	SFQTHDRLCF	VMEYANGGEL	480
481	FFHLSRERVF	SEDRARFYGA	EIVSALDYHL	SEKNVVYRDL	KLENMLDKD	GHIKITDFGL	540
541	CKEGIKDGAT	MKTFCGTPEY	LAPEVLEDND	YGRAVDWVGL	GVVMYEMMCG	RLPFYNQDHE	600
601	KLFELILMEE	IRFPRTLGP	AKSLLSGLLK	KDPKQRLGGG	SEDAKEIMQH	RFFAGIVWQH	660
661	VYEKLSPPF	KPQVTSETDT	RYFDEEFTAQ	MITITPPDQD	DSMECVDSE	RPHFPQFSYS	720
721	ASGTA						780

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

AKT1 wt ¹ amino acid sequence							
1	MSDVAIVKEG	WLHKRGEYIK	TWRPRYFLLK	NDGTFIGYKE	RPQDVDQREA	PLNNFSVAQC	60
61	QLMKTERPRP	NTFIIRCLQW	TTVIERTFHV	ETPEEREWEW	TAIQTVADGL	KKQEEEEEMDF	120
121	RSGSPSDNSG	AEEMEVSLAK	PKHRVTMNEF	EYLKLLGKGT	FGKVIIVKEK	ATGRYYAMKI	180
181	LKKEVIVAKD	EVAHTLTENR	VLQNSRHPFL	TALKYSFQTH	DRLCFVMEYA	NGGELFFHLS	240
241	RERVFSEDRA	RFYGAIEVSA	LDYLHSEKNV	VYRDLKLENL	MLDKDGHIKI	TDFGLCKEGI	300
301	KDGATMKTFC	GTPEYLAPEV	LEDNDYGRAV	DWVGLGVVMY	EMMCGRLPFY	NQDHEKLFEL	360
361	ILMEEIRFPR	TLGPEAKSL	SGLLKKDPKQ	RLGGGSEDAK	EIMQHRFFAG	IVWQHVEYK	420
421	LSPPFKPQVT	SETDTRYFDE	EFTAQMITIT	PPDQDSDMEC	VDSERRPHFP	QFSYSASGTA	480

blue: AKT1 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_005154.2

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