

Product datasheet for **SC323670**

AKT3 (NM_005465) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AKT3 (NM_005465) Human Untagged Clone
Tag:	Tag Free
Symbol:	AKT3
Synonyms:	MPPH; MPPH2; PKB-GAMMA; PKBG; PRKBG; RAC-gamma; RAC-PK-gamma; STK-2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC323670 sequence for NM_005465 edited (data generated by NextGen Sequencing)

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ATGAGCGATGTTACCATTGTGAAAGAAGGTTGGGTTTCAGAAGAGGGGAGAATATATAAAA
AACTGGAGGCCAAGATACTTCCTTTTGAAGACAGATGGCTCATTCATAGGATATAAAGAG
AAACCTCAAGATGTGGATTTACCTTATCCCCTCAACAACTTTTTCAGTGGCAAAATGCCAG
TTAATGAAAACAGAACGACCAAAGCCAAACACATTTATAATCAGATGTCTCCAGTGGACT
ACTGTTATAGAGAGAACATTTTCATGTAGATACTCCAGAGGAAAGGGAAGAATGGACAGAA
GCTATCCAGGCTGTAGCAGACAGACTGCAGAGGCCAAGAAGAGGAGAGAATGAATTGTAGT
CCAACCTCACAAAATTGATAATATAGGAGAGGAAGAGATGGATGCCTCTACAACCCATCAT
AAAAGAAAGACAATGAATGATTTTGACTATTTGAAACTACTAGGTAAAGGCACTTTTGGG
AAAGTTATTTTGGTTTCGAGAGAAGGCAAGTGGAAAATACTATGCTATGATGATTCTGAAG
AAAGAAGTCATTATTGCAAAGGATGAAGTGGCACACACTCTAACTGAAAGCAGAGTATTA
AAGAACACTAGACATCCCTTTTTAACATCCTTGAATATTCCTCCAGACAAAAGACCGT
TTGTGTTTTGTGATGGAATATGTTAATGGGGGCGAGCTGTTTTCCATTTGTGCGAGAGAG
CGGGTGTCTCTGAGGACCGCACACGTTTCTATGGTGCAGAAATGTCTCTGCCTTGGAC
TATCTACATTCGGAAAGATTGTGTACCGTGATCTCAAGTTGGAGAATCTAATGCTGGAC
AAAGATGGCCACATAAAAATTACAGATTTTGGACTTTGCAAAGAAGGGATCACAGATGCA
GCCACCATGAAGACATTCTGTGGCACTCCAGAATATCTGGCACCAGAGGTGTTAGAAGAT
AATGACTATGGCCGAGCAGTAGACTGGTGGGGCCTAGGGGTTGTCATGTATGAAATGATG
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GAAGACATTAATTTCTCGAACACTCTCTTCAGATGCAAAATCATTGCTTTTCAGGGCTC
TTGATAAAGGATCCAAATAAACGCCTTGGTGGAGGACCAGATGATGCAAAAGAAATATG
AGACACAGTTTTCTCTGAGTAAACTGGCAAGATGTATATGATAAAAAGCTTTGTACTC
CCTTTTAAACCTCAAGTAACATCTGAGACAGATACTAGATATTTTGATGAAGAATTTACA
GCTCAGACTATTACAATAACACCACCTGAAAAATATGATGAGGATGGTATGGACTGCATG
GACAAATGAGAGCGGCCCATTTCCCTCAATTTTCTACTCTGCAAGTGGACGAGAATAA
    
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Clone variation with respect to NM_005465.4
530 a=>t

5' Read Nucleotide Sequence:

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>OriGene 5' read for mutant NM_005465 unedited
CCGCCCGTTGTAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAAATTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCCAAACCCCTAAAG
CTGATATCACAAAGTACCATTTCTCCAAGTTGGGGGCTCAGAGGGGAGTCATCATGAGCGATGTTACCAT
TGTGAAAGAAGGTTGGGTTTCAGAAGAGGGGAGAATATATAAAAACTGGAGGCCAAGATACTTCCTTTTG
AAGACAGATGGCTCATTCATAGGGATATAAAGAGAAAACCTCAAGATGTGGATTTACCTTATCCCCCTCAA
CAAATTTTTTCAGTGGCAAAAATGCCAGGTTAATGAAAACCCAGACCCACCAAGCCAAAACACCATTTTA
TAATCCAAATGTTCTCCATTGGACTACTGGTTATAGAAGAAAAACATTCATGGGAAAATACTCCAAAGGA
AAGGAAAATGGGGACAAAACCTTTCCAGGCCTGTACCAAAACAAAACCTGCAAAGGCAGGAAAGGGAAAGAA
TGATTTGTATCCCAACTTCAAAATTTGAAAATATAGGAAAGAAAAATAGATGTCCCTTTACACCCCTAT
ATAAGGAGAGCACATGTGAGATTTAGAATATTTGAAAACATAGGAAAGCGCCTTTTGGGAAAGTTTTTT
TTGGTTTCAGAAGGGGCTGGTGGAAAACCTTGTGCTAGGGAGTTTTTCAGAAAAAAAATGTTTATTTGG
GCAAGAGGAGAGAGTGTGCACACACCTCTCCTGTGAGACCGCGAGATTTATAGACACACCTCCACCCCTC
TGTTTAACACCCTGCGAGAATTCCTCCACACAACAACACACTTGTGTGTGTTGAGAGAATAATTATAGAG
TGCGGAGCCAGTTTTCTATCTTTGAAGAAGAGCGTGTGTTCTTAGACGACACCACTATATGCGCAAATCT
GGCTGCTGATACTACTACTCGCAAGTAGTGTCTGT
    
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Kinase Domain Sequence:	>SC323670 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation CYTTGMGCATGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCA GAATTTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCCAAACCCTAAAGCTGATAT CACAAAGTACCATTTCTCCAAGTTGGGGCTCAGAGGGGAGTCATCATGAGCGATGTTACCATTGTGAAA GAAGTTGGGTTTCCAGAAGAGGGGAGAATATATAAAAACTGGAGG
Restriction Sites:	Please inquire
ACCN:	NM_005465
Insert Size:	5000 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_005465.3 , NP_005456.1
RefSeq Size:	3588 bp
RefSeq ORF:	1440 bp
Locus ID:	10000

UniProt ID:	<u>Q9Y243</u>
Cytogenetics:	1q43-q44
Domains:	pkinase, S_TK_X, TyrKc, PH, S_TKc
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase
Protein Pathways:	Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Melanoma, mTOR signaling pathway, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Tight junction, Toll-like receptor signaling pathway, VEGF signaling pathway
Gene Summary:	<p>The protein encoded by this gene is a member of the AKT, also called PKB, serine/threonine protein kinase family. AKT kinases are known to be regulators of cell signaling in response to insulin and growth factors. They are involved in a wide variety of biological processes including cell proliferation, differentiation, apoptosis, tumorigenesis, as well as glycogen synthesis and glucose uptake. This kinase has been shown to be stimulated by platelet-derived growth factor (PDGF), insulin, and insulin-like growth factor 1 (IGF1). Alternatively splice transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1) represents the longest transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>