

Product datasheet for **MG227413**

Akt1 (NM_001165894) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Akt1 (NM_001165894) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Akt1
Synonyms:	Ak; Akt; LTR-akt; PK; PKB; PKB/A; PKB/Akt; PKBalpha; Rac
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG227413 representing NM_001165894
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAACGACGTAGCCATTGTGAAGGAGGGCTGGCTGCACAAACGAGGGGAATATATATAAACCTGGCGGC
 CACGCTACTTCCCTCAAGAACGATGGCACCTTTATTGGCTACAAGGAACGGCCTCAGGATGTGGATCA
 GCGAGAGTCCCCACTCAACAACCTTCTCAGTGGCACAATGCCAGCTGATGAAGACAGAGCGGCCAAGGCC
 AACACCTTTATCATCCGCTGCCTGCAGTGGACCACAGTATTGAGCGCACCTTCCATGTGAAACGCCTG
 AGGAGCGGAAGAATGGGCCACCGCCATTCAGACTGTGGCAGATGGACTCAAGAGGCAGGAAGAAGAGAC
 GATGGACTTCGATCAGGCTCACCCAGTACAACCTCAGGGGTGAAGAGATGGAGGTGTCCCTGGCCAAG
 CCCAAGCACCGTGTGACCATGAACGAGTTTGTGACTGAGTACTGGCAAGGCACCTTTGGGAAGG
 TGATTCTGGTGAAGAGAAGGCCACAGGCCGCTACTATGCCATGAAGATCCTCAAGAAGGAGGTCATCGT
 CGCAAGGATGAGTTGCCACACGCTTACTGAGAACCGTGTCTGCAGAACTCTAGGCATCCCTTCTCT
 ACGGCCCTCAAGTACTCATTCCAGACCCACGACCCTCTGCTTTGTTCATGGAGTATGCCAACGGGGGCG
 AGCTCTTCTTCCACCTGTCTCGAGAGCGTGTGTTCTCCGAGGACCGGGCCGCTTCTATGGTGGGAGAT
 TGTGTCTGCCCTGGACTACTTGCCTCCGAGAAGAACGTGGTGTACCGGGACCTGAAGCTGGAGAACCTC
 ATGCTGGACAAGGACGGGCACATCAAGATAACGGACTTCGGGCTGTGCAAGGAGGGGATCAAGGACGGTG
 CCACTATGAAGACATTCTGCGGAACCGCGGAGTACCTGGCCCCTGAGGTGCTGGAGGACAACGACTACGG
 CCGTGCAGTGGACTGGTGGGGCTGGGCGTGGTGTACGAGATGATGTGTGGCCGCTGCCCTTCTAC
 AACCAGGACCACGAGAAGCTGTTTCGAGCTGATCCTCATGGAGGAGATCCGCTTCCCGCCACACTCGGCC
 CTGAGGCCAAGTCCCTGCTCTCCGGCTGCTCAAGAAGGACCTACACAGAGGCTCGGTGGGGCTCCGA
 GGATGCCAAGGAGATCATGCAGCACCGGTTCTTTGCCAACATCGTGTGGCAGGATGTGATGAGAAGAAG
 CTGAGCCACCTTTCAAGCCCCAGGTACCTCTGAGACTGACACCAGGATTTTCGATGAGGAGTTCACAG
 CTCAGATGATCACCATCACGCCGCTGATCAAGTTCTCTACTCAGCCAGTGGCACAGCCTGAGGCTGG
 GGCAGCGGCTGGCAGCTCCACGCTCTCTGCATTGCCAGTCCAGAAGCCCCGCATGGATCATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

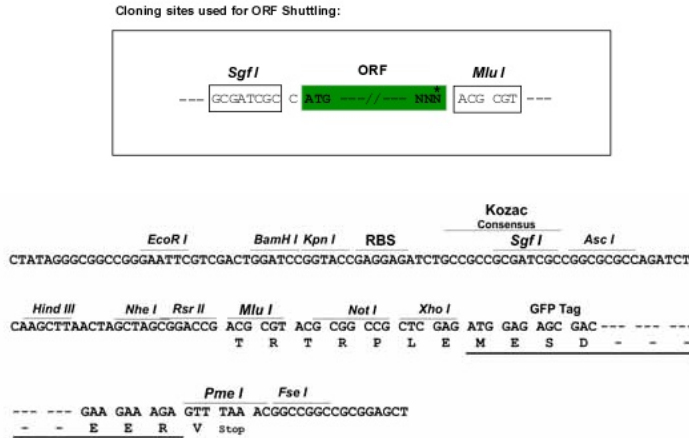
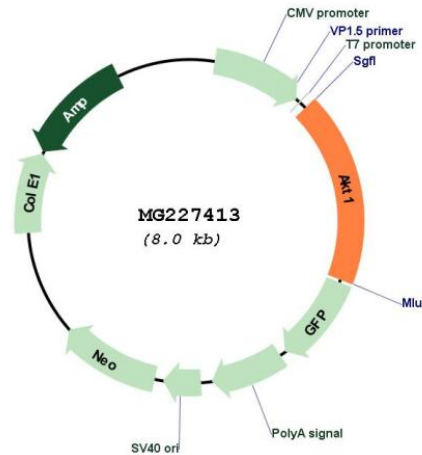
>MG227413 representing NM_001165894
 Red=Cloning site Green=Tags(s)

MNDVAIVKEGWLHKRGEYIKTWRPRYFLLKNDGTFIGYKERPQDQVQRESPLNNFSVAQCQLMKTERPRP
 NTFIIRCLQWTTVIERTFHVETPEEREWATAIQTVADGLKRQEEETMDFRSGSPSDNSGAEEMEVS
 LAKPKHRVTMNEFEYLKLLGKGTGKVLVKEKATGRYYAMKILKKEVIVAKDEVAHTLTENRVLQNSRHPFL
 TALKYSFQTHDRLCFVMEYANGGELFFHLSRERVFSEDRARFYGAEIVSALDYHSEKNVYRDLKLENL
 MLDKDGHIKITDFGLCKEIKDGATMKTFCGTPEYLAPEVLEDNDYGRAVDWWGLGVVYEMMCGRLPFY
 NQDHEKLFELILMEEIRFPRTLGPPEAKSLLSGLLKDPTQRLGGGSEDAKEIMQHRFFANIVWQDVYEKK
 LSPPFKPQVTSETDTRYFDEEFTAQMITITPPDQVLLLSQWHSRLRPGAAAGSSTLLCIAESRSPAWII

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Plasmid Map:


- ACCN:** NM_001165894
- ORF Size:** 1464 bp
- OTI Disclaimer:** 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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
- 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:

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_001165894.1](#), [NP_001159366.1](#)

RefSeq Size: 2657 bp

RefSeq ORF: 1467 bp

Locus ID: 11651

UniProt ID: [P31750](#)

Cytogenetics: 12 61.2 cM

Gene Summary: This gene encodes the founding member of the Akt serine-threonine protein kinase gene family that also includes Akt2 and Akt3. This kinase is a major downstream effector of the phosphatidylinositol 3-kinase (PI3K) pathway that mediates the effects of various growth factors such as platelet-derived growth factor (PDGF), epidermal growth factor (EGF), insulin and insulin-like growth factor I (IGF-I). It is activated through recruitment to cellular membranes by PI3K lipid products and by phosphorylation by 3-phosphoinositide dependent kinase-1. It then further phosphorylates different downstream proteins in response to various extracellular signals and thus plays a pivotal role in mediating a variety of cellular processes, such as glucose metabolism, glycogen biosynthesis, protein synthesis and turn over, inflammatory response, cell survival (anti-apoptosis) and development. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2009]