

Product datasheet for **RR200527**

Ak2 (NM_001033967) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Ak2 (NM_001033967) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Ak2
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR200527 representing NM_001033967
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTCCCAACGCGTTGGCTCCTGAACCGGAGCATCCGAAGGGCATCCGGGCCGTGTTGCTGGGGCCTC
CCGGGGCTGGCAAGGGGACCCAGGCACCAAAATGGCTGAGAATTTCTGTCTGTCACTTGGCCACTGG
GGACATGCTGAGAGCGATGGTAGCTTCAGGCTCGGAGCTGGGGAAAAAGCTGAAGGCGACAATGGATGCC
GGAAAACTGGTGAAGTGAATGGTCTGGAGCTCATTGAGAAGAATTTGGAGACTCCTTCCTGCAAAA
ATGGCTTTCTTAGATGGCTTCCCTCGGACTGTGAAGCAGGCTGAAATGCTTGTGACCTCATGGATAA
GAGGAAAGAGAAGCTCGATTCAGTCATCGAGTTCAGCATCCAGGACTCCCTGCTGATCCGGAGAATCAGC
GGAAGGCTGATTCACCCCAAGAGTGGCCGGTCTACCATGAGGAGTCAACCCTCCAAGGAGGCCATGA
AAGATGATATCACTGGGAGCCCTGATCCGCAGGTCAGATGACAACGAGAAAGCCTGAAGACCCGCCT
GGAGGCCTACCACACTCAGACCACTCCGCTTGTGGAATACTACAGGAAACGGGGCATTCACTGCGCCATT
GATGCGTCCCAGACCCCTGACGTGGTGTGCAAGCATCTGGCAGCCTTCTCCAAGCCACATCC

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR200527 representing NM_001033967
Red=Cloning site Green=Tags(s)

MAPNALAPEPEHPKGIKAVLLGPPGAGKGTQAPKLAENFCVCHLATGDMLRAMVASGSELGKCLKATMDA
GKLVSDENVVELIEKNLETPSCKNGFLLDGFPRVTKQAEMLLDMDKRKEKLDVIEFSIQDSSLIRRI
GRLIHPKSGRSYHEEFNPPKEAMKDDITGEPLIRRSDDNEKALKTRLEAYHTQTTPLEVEYRKRGIHCAI
DASQTPDVVFASILAFAFSKATS

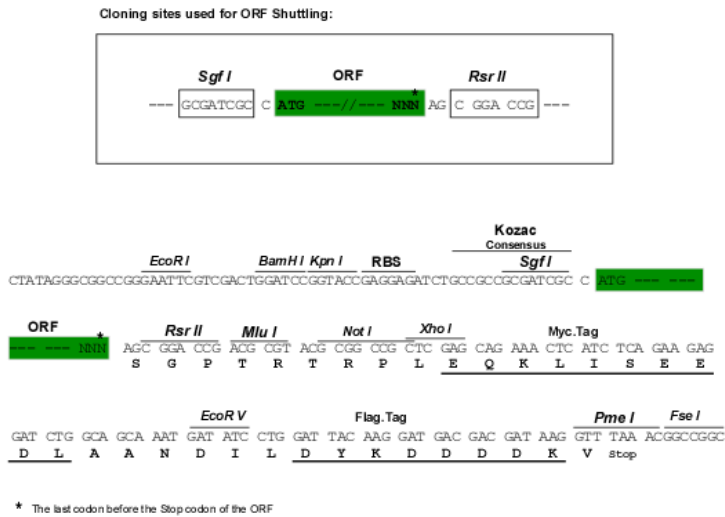
SGP**TRTRRLEQKLI**SEEDLAANDILDYKDDDDKV



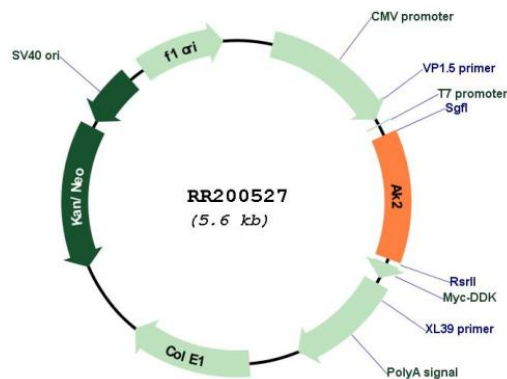
[View online »](#)

Restriction Sites: SgfI-RsrII

Cloning Scheme:



Plasmid Map:



ACCN: NM_001033967

ORF Size: 696 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:	<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:	<u>NM_001033967.2, NP_001029139.1</u>
RefSeq Size:	1666 bp
RefSeq ORF:	699 bp
Locus ID:	24184
UniProt ID:	<u>P29410</u>
Cytogenetics:	5q36
MW:	26 kDa
Gene Summary:	Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism. Adenylate kinase activity is critical for regulation of the phosphate utilization and the AMP de novo biosynthesis pathways. Plays a key role in hematopoiesis.[UniProtKB/Swiss-Prot Function]