

Product datasheet for **RR207334**

Actr2 (NM_001009268) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Actr2 (NM_001009268) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Actr2
Synonyms: MGC95085
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR207334 representing NM_001009268
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGACAGCCAGGGCAGGAAGGTGGTGGTGTGCGACAACGGCACTGGGTTTGTGAAGTGTGGATATGCAG
GCTCTAACTTTCCAGAACACATCTTCCCAGCTTTGGTTGGAAGACCTATTATCAGATCAACCACAAAGT
GGGAAACATTGAAATCAAGGATCTCATGGTTGGCGATGAGGCAAGTGAAGTGCCTCCATGTTGGAGGTG
AACTACCCGATGGAGAACGGCATCGTGCACAACCTGGGACGACATGAAGCACCTGTGGACTACACATTCCG
GGCCAGAGAAGCTCAATATAGACACCAGGAGCTGCAAGATCTTACTTACAGAACCCCAATGAATCCAAC
CAAGAACAGAGAGAAGATTGTCGAGGTAATGTTTGAACCTTACCAGTTTTCTGGTGTGTATGTAGCCATC
CAAGCAGTTCTGACTTTGTATGCTCAAGGTTTACTGACTGGTGTGGTAGTGGACTCTGGAGATGGTGTCA
CTCACATTTGCCAGTATATGAAGGCTTTCCCTCCCTCACCTTACAAGGAGGCTGGATATTGCTGGGAG
GGATATTACCAGGTATCTTATCAAGCTGCTGCTGTTGCGAGGATATGCCTTCAACCATTCTGCTGACTTT
GAGACAGTTCGCATGATTAAGAAAAAATTTGTTATGTGGTTACAATATTGAGCAAGAGCAGAAGCTGG
CCTTAGAGACCACAGTGCTAGTTGAGTCATACACTCTTCCAGATGGACGTATTATTAAGTTGGAGGAGA
AAGATTTGAAGCACCAGAAGCTTTATTTACGCCTCATTTGATCAATGTTGAGGGGTTGGTGTGCTGAA
TTGCTTTTTAACACAATCCAGGCAGCCGACATTGATACCAGATCTGAATTTTATAAGCACATTGTGCTTT
CTGGAGGTTCTACCATGTATCCTGGCCTGCCATCGAGGTTGGAACGAGAGCTTAAACAGCTTTACCTAGA
ACGAGTTCTGAAAGGAGATGTGGAGAACTTTGAAAATTAAGATCCGCATTGAAGACCCGCTCGCAGG
AAGCACATGGTGTCTTGGGTGGCGCAGTCTAGCAGACATCATGAAAGACAAAGACAACCTCTGGATGA
CCAGACAAGAGTACCAAGAAAAGGGTGTCCGTGTGCTGGAGAACTCGGTGTGACTGTTCGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR207334 representing NM_001009268
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MDSQGRKVVVCDNGTGFVKCGYAGSNFPEHIFPALVGRPIIRSTTKVGNIEIKDLMVGDEASELRSMLEV
 NYPMENGIVRNWDDMKHLWDYTFGPEKLNIDTRSKILLTEPPMNPTKNREKIVEVMFETYQFSGVYVAI
 QAVLTLYAQGLLTVVVVSDGDGVTHICPVYEGFSLPHLTRRLDIAGRDITRYLIKLLLRGYAFNHSADF
 ETVRMIKEKLCYVGYNIEQEQLALETTVLVESYTLPDGRIKVGGERFEAPEALFQPHLINVEGVGVAE
 LLFNTIQAADIDTRSEFYKHIVLSGGSTMYPLPSRLERELKQLYLERVLKGDVEKLSKFKIRIEDPPRR
 KHMVFLGGAVLADIMKDKDNFWMTRQEYQEKGVRVLEKLGVTVR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

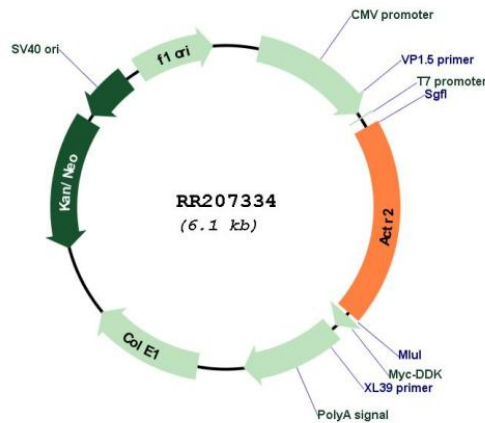
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001009268

ORF Size:	1182 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:	NM_001009268.1 , NP_001009268.1
RefSeq Size:	1326 bp
RefSeq ORF:	1185 bp
Locus ID:	289820
UniProt ID:	Q5M7U6
Cytogenetics:	14q22
MW:	44.7 kDa
Gene Summary:	ATP-binding component of the Arp2/3 complex, a multiprotein complex that mediates actin polymerization upon stimulation by nucleation-promoting factor (NPF). The Arp2/3 complex mediates the formation of branched actin networks in the cytoplasm, providing the force for cell motility. Seems to contact the pointed end of the daughter actin filament. In addition to its role in the cytoplasmic cytoskeleton, the Arp2/3 complex also promotes actin polymerization in the nucleus, thereby regulating gene transcription and repair of damaged DNA. The Arp2/3 complex promotes homologous recombination (HR) repair in response to DNA damage by promoting nuclear actin polymerization, leading to drive motility of double-strand breaks (DSBs).[UniProtKB/Swiss-Prot Function]