

Product datasheet for **RR200557**

Akr7a2 (NM_134407) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Akr7a2 (NM_134407) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Akr7a2
Synonyms:	Aiar
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR200557 representing NM_134407 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTCCCGGTCTCCGGCACCCCGCGCCGTCTCTGGCGCCCTCTCCGGCCCGGTACGGTGTCTGGCACCA
TGGAGATGGGGCGCCGCATGGATGCGAGTGTAGCGCTGCGACCGTACCGCCTTCTGGAGCGCGGCT
CAACGAGCTGGACACGGCCTTCATGTATTGCGACGGCCAGTCCGAAAGCATCCTGGGCAGCTGGGGCTC
GGGCTGGGCAGCGCGACTGCACAGTGAAAATTGCCACCAAGGCCAACCTTGGGACGGGAAGTCGCTGA
AGCCTGACAGTGTCCGGTCCCAATTAGAGACGTCATTGAAGCGGCTGCAGTGTCCCGGGTGGACCTCTT
CTACTTACACGCTCCTGACCACGGCACTCCTATCGTGGAGACCCTGCAGGCTGCCAACAGCTGCATCAG
GAGGGCAAGTTTGTGGAGCTTGGCTTGTCCAACATGCCTCCTGGGAGGTAGCCGAGATCTATACCTCT
GTAAAAGCAACGGCTGGATCCTGCCAAGTGTACCAGGGCATGTACAACGCCACCACCCGGCAGGTGGA
GACTGAGCTCCTCCCCTGCCTCAGATACTTCGGACTGAGGTTCTATGCCTACAACCCTTTGGCTGGAGGC
CTGCTGACTGGCAAATACAGATATGAAGACAAGGATGGAAACAGCCCGAGGGCCGCTTCTTTGGGAATA
GCTGGTCTGAGACCTACAGGAACCGCTTCTGGAAGGAACACCCTTTGAGGCCATTGCCCTGGTAGAAAA
GGCCCTGAAGACCACCTATGGCACCAGTGCCCCAGCATGACCTCGGCTGCCCTGGCTGGATGTACCAT
CACTCACAGCTCCAGGGCACCCGAGGGACGCAGTCATCTTGGGCATGTCCAGCCTGGAGCAGCTGGAGC
AGAATTGGCGGCCACTGAGGAAGTCCCCTGGAGCCGCTGTGCTGGAGGCCCTTAACCAAGCCTGGAA
CGTGGTCGCCACGAGTGTCCCACTACTTCAGA

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR200557 representing NM_134407
 Red=Cloning site Green=Tags(s)

MSRSPAPRAVSGAPLRPGTVLGTMEMGRMDASASAAVRAFLERGLNELDTAFMYCDGQSESLGSLGL
 GLGSGDCTVKIATKANPWDGKSLKPDVSRVSRQLETSLKRLQCPRVDFYLHAPDHGTPIVETLQACQQLHQ
 EGKFVELGLSNYASWEVAEIYTLCKSNGWILPTVYQGMYNATTROVETELLPLCLRYFGLRFYAYNPLAGG
 LLTGKYRYEDKDGKQPEGRFFGNSWSETYRNRWFKEHHFEAIALVEKALKTTYGTAPSMTSAALRWMYH
 HSQ LQGTRGDAVILGMSLEQLEQNLAATEEGPLEPAVVEAFNQAWNVAHECPNYFR

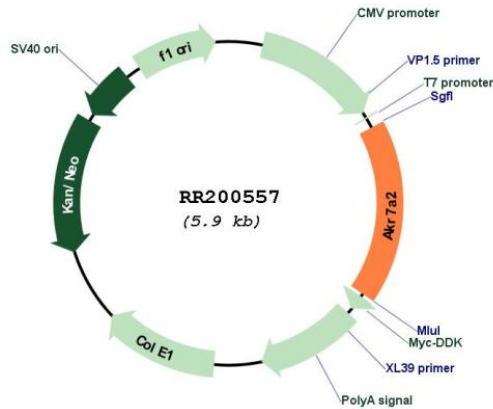
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_134407

ORF Size: 1014 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_134407.1 , NP_599234.1
RefSeq Size:	1272 bp
RefSeq ORF:	1017 bp
Locus ID:	171445
UniProt ID:	Q8CG45
Cytogenetics:	5q36
MW:	37.6 kDa
Gene Summary:	Catalyzes the NADPH-dependent reduction of succinic semialdehyde to gamma-hydroxybutyrate. May have an important role in producing the neuromodulator gamma-hydroxybutyrate (GHB). Has broad substrate specificity. Can reduce the dialdehyde protein-binding form of aflatoxin B1 (AFB1) to the non-binding AFB1 dialcohol. Acts as a 2-carboxybenzaldehyde reductase.[UniProtKB/Swiss-Prot Function]