

Product datasheet for **MC200155**

Akr1b3 (BC004725) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Akr1b3 (BC004725) Mouse Untagged Clone
Tag: Tag Free
Symbol: Akr1b3
Synonyms: Akr1b1, AR, ALR2
Mammalian Cell Selection: Neomycin
Vector: PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection: Kanamycin (25 ug/mL)

Fully Sequenced ORF: >BC004725
 CGGACGCGTGGGTTTGTAACTGACGAGCATCATGGCCAGCCATCTGGAACCAACAACGGCACCAAGATG
 CCCACCCTGGGCCTGGGCACCTGGAAGTCCCCTCCTGGCCAGGTGACTGAGGCCGTGAAAGTTGCTATTG
 ACTTGGGGTACCGCCACATTGACTGCGCCAGGTGTACCAAGAATGAGAAGGAGGTGGGAGTGGCCCTCCA
 GGAGAAGCTCAAGGAGCAGGTGGTGAAGCGGCAGGATCTTTCATTGTCAAGCAAGCTGTGGTGCACGTTT
 CATGACAAGAGCATGGTGAAGGAGCCTCCAGAAGACTGAGCGACCTGCAGCTGGACTACCTGGATC
 TCTACCTTATTCACTGGCCAACGGGGTTCAAGCCTGGGCCGACTATTTCCCACTGGATGCCTCAGGGAA
 CGTGATACCTAGTGACACCGATTTTGTGGACACTTGGACGGCTATGGAACAAGTGGATGAAGGTTT
 GTGAAAACAATCGGTGTCTCCAACCTTCAACCTCTTCAAGATTGAGAGGATCTTGAACAACTGGCTTAA
 AATATAAGCCTGCGGTGAACCAGATCGAGTGCCACCCGTACCTAACTCAGGAGAAGCTGATTGAATACTG
 CCACAGCAAAGGCATCGTGGTGACAGCATATAGTCCCCTTGGTTCTCCTGACAGGCCCTGGGCCAAGCCT
 GAAGATCCGTCTCTCCTGGAGGATCCCAGGATCAAAGCAATTGCAGCCAAGTACAATAAACTACAGCCC
 AGGTGCTGATCCGGTTCCCATTCAGAGGAACTTGGTAGTGATCCCAAGTCTGTGACACCAAGTGCAT
 TGCTGAGAACTTGAAGGTCTTTGACTTTGAGCTGAGCAGCGAGGACATGGCCACTCTACTCAGCTACAAC
 AGGAACTGGAGGGTGTGCGCCTTGATGAGCTGTGCCAAACACAAGGATTACCCCTTCCACGCCGAAGTCT
 GAAGCTGTGGCGAGCGGATCCCTGCTCCTCAAGTGGCTTGCACCTGTTCTTTCTGCCTCATCTGCC
 TTGCAAGTGTCTGTGTCTGCACTAGGTGGCACCTTGCAAACAGATGGTGAAGTGTAGTTAGTTTGA
 TAGAGTCTGGAGGGCAGTACCAGTAGCCAAGGTGTTTCTCCAGCCTTCTTGGTCTTTCTTCTTACCCA
 CCTGGAGGACTTTAACACAAGTACCCTTTCCAACCAAGAGAAGCAAGCTTTAGAGTCCAAGCCGTGCCA
 CTAACACTTAAATGTGAGTGCTTAGAACTGTAATCCTTTGGGTGACACTTCTCCTTGCCTCAAATAAAAA
 CTGCTTTTGTGAAAAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI
ACCN: BC004725
Insert Size: 951 bp



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	BC004725 , AAH04725
RefSeq Size:	1358 bp
RefSeq ORF:	951 bp
Locus ID:	11677
Cytogenetics:	6 B1
Gene Summary:	Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols (PubMed:17381426, PubMed:19010934, PubMed:7851421). Displays enzymatic activity towards endogenous metabolites such as aromatic and aliphatic aldehydes, ketones, monosaccharides, bile acids and xenobiotics substrates. Key enzyme in the polyol pathway, catalyzes reduction of glucose to sorbitol during hyperglycemia. Reduces steroids and their derivatives and prostaglandins (PubMed:19010934). Displays low enzymatic activity toward all-trans-retinal, 9-cis-retinal, and 13-cis-retinal. Catalyzes the reduction of diverse phospholipid aldehydes such as 1-palmitoyl-2-(5-oxovaleroyl)-sn -glycero-3-phosphoethanolamin (POVPC) and related phospholipid aldehydes that are generated from the oxydation of phosphotidylcholine and phosphatdyleethanolamides (PubMed:17381426). Plays a role in detoxifying dietary and lipid-derived unsaturated carbonyls, such as crotonaldehyde, 4-hydroxynonenal, trans-2-hexenal, trans-2,4-hexadienal and their glutathione-conjugates carbonyls (GS-carbonyls) (By similarity). [UniProtKB/Swiss-Prot Function]