

Product datasheet for RC213538

AKR1C2 (NM_001354) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AKR1C2 (NM_001354) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AKR1C2
Synonyms:	AKR1C-pseudo; BABP; DD; DD-2; DD/BABP; DD2; DDH2; HAKRD; HBAB; MCDR2; SRXY8; TDD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC213538 representing NM_001354 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATTCGAAATACCAGTGTGTGAAGCTGAATGATGGTCACTTCATGCCTGTCCTGGGATTTGGCACCT
ATGCGCCTGCAGAGGTTCTAAAAGTAAAGCTCTAGAGGCCGTCAAATGGCAATAGAAGCCGGTTCCA
CCATATTGATTCTGCACATGTTTACAATAATGAGGAGCAGGTTGGACTGGCCATCCGAAGCAAGATTGCA
GATGGCAGTGTGAAGAGAGAAGACATATTCTACACTTCAAAGCTTTGGAGCAATCCCATCGACCAGAGT
TGGTCCGACCAGCCTTGAAAGGTCACCTGAAAAATCTTCAATTGGACTATGTTGACCTCTATCTTATTCA
TTTTCCAGTGTCTGTAAAGCCAGGTGAGGAAGTGATCCCAAAAGATGAAAATGAAAAAATACTATTTGAC
ACAGTGGATCTCTGTGCCACATGGGAGGCCATGGAGAAGTGAAAAGATGCAGGATTGGCCAAGTCCATCG
GGGTGTCCAACCTCAACCACAGGCTGCTGGAGATGATCCTCAACAAGCCAGGGCTCAAGTACAAGCCTGT
CTGCAACCAGGTGGAATGTCATCCTTACTTCAACCAGAGAAAAGTCTGGATTTCTGCAAGTCAAAAAGAC
ATTGTTCTGGTTGCCTATAGTGTCTGGGATCCCATCGAGAAGAACCATGGGTGGACCCGAACCTCCCGG
TGCTCTGGAGGACCCAGTCCTTTGTGCCTTGGCAAAAAGCACAAGCGAACCCAGCCCTGATTGCCCT
GCGCTACCAGCTGCAGCGTGGGTTGTGGTCTGGCCAAGAGCTACAATGAGCAGCGCATCAGACAGAAC
GTGCAGGTGTTGAATTCAGTTGACTTCAGAGGAGATGAAAGCCATAGATGGCCTAAACAGAAAATGTGC
GATATTTGACCCTTGATATTTTTGCTGGCCCCCTAATTATCCATTTTCTGATGAATAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC213538 representing NM_001354
Red=Cloning site Green=Tags(s)

MDSKYQCVKLNDGHFMPVLGFGTYAPAEVPKSKALEAVKLAIEAGFHHIDSAHVYNNEEQVGLAIRSKIA
 DGSVKREDIFYTSKLWSNSHRPELVRPALERSLKNLQLDYVDLYLIHFVSVKPGEEVIPKDENGILFD
 TVDLCATWEAMEKCKDAGLAKSIGVSNFNHRLLEMILNKPLKYKPVCNQVECHPYFNQRKLLDFCKSKD
 IVLVAYSALGSHREEPWVDPNSPVLLEDPVLCALAKKHKRTPALIALRYQLQRGVVVLAKSYNEQIRIQN
 VQVFEFQLTSEEMKAIDGLNRNVRYLTLDIFAGPPNYPFSDYE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6036_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001354

ORF Size: 969 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001354.5](#)

RefSeq Size: 1663 bp

RefSeq ORF: 972 bp

Locus ID: 1646

UniProt ID: [P52895](#)

Cytogenetics: 10p15.1

Domains: aldo_ket_red

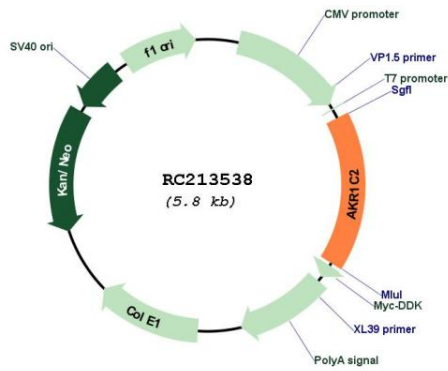
Protein Families: Druggable Genome

Protein Pathways: Metabolism of xenobiotics by cytochrome P450

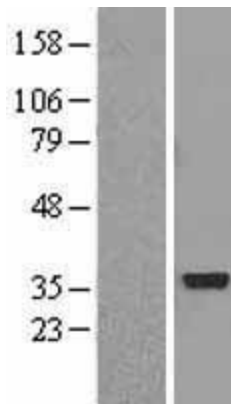
MW: 36.6 kDa

Gene Summary: This gene encodes a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. These enzymes catalyze the conversion of aldehydes and ketones to their corresponding alcohols using NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme binds bile acid with high affinity, and shows minimal 3-alpha-hydroxysteroid dehydrogenase activity. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Dec 2011]

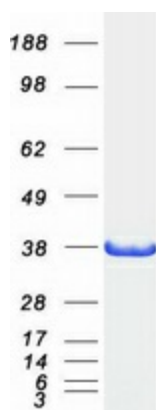
Product images:



Circular map for RC213538



Western blot validation of overexpression lysate (Cat# [LY400539]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213538 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AKR1C2 protein (Cat# [TP313538]). The protein was produced from HEK293T cells transfected with AKR1C2 cDNA clone (Cat# RC213538) using MegaTran 2.0 (Cat# [TT210002]).