

## Product datasheet for **RG209081**

### **AKR1C2 (NM\_205845) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AKR1C2 (NM_205845) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AKR1C2
Synonyms:	AKR1C-pseudo; BABP; DD; DD-2; DD/BABP; DD2; DDH2; HAKRD; HBAB; MCDR2; SRXY8; TDD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209081 representing NM_205845 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATTCGAAATACCAGTGTGTGAAGCTGAATGATGGTCACTTCATGCCTGTCCTGGGATTTGGCACCT  
ATGCGCCTGCAGAGGTTCTAAAAGTAAAGCTCTAGAGGCCGTCAAATTGGCAATAGAAGCCGGTTCCA  
CCATATTGATTCTGCACATGTTTACAATAATGAGGAGCAGTTGGACTGGCCATCCGAAGCAAGATTGCA  
GATGGCAGTGTGAAGAGAGAAGACATATTCTACACTTCAAAGCTTTGGAGCAATCCCATCGACCAGAGT  
TGGTCCGACCAGCCTTGAAAAGTCACTGAAAAATCTTCAATTGGACTATGTTGACCTCTATCTTATTCA  
TTTTCCAGTGTCTGTAAAGCCAGGTGAGGAAGTGATCCCAAAAGATGAAAATGAAAAAATACTATTTGAC  
ACAGTGGATCTCTGTGCCACATGGGAGGCCATGGAGAAGTGAAAAGATGCAGGATTGGCCAAGTCCATCG  
GGGTGTCCAACCTCAACCACAGGCTGCTGGAGATGATCCTCAACAAGCCAGGGCTCAAGTACAAGCCTGT  
CTGCAACCAGGTGGAATGTCATCCTTACTTCAACCAGAGAAAAGTCTGGATTTCTGCAAGTCAAAGAC  
ATTGTTCTGGTTGCCTATAGTGTCTGGGATCCCACCGAGAAGAACCATGGGTGGACCCGAACCTCCCGG  
TGCTCTGGAGGACCCAGTCCTTTGTGCCTTGGCAAAAAAGCACAAGCGAACCCAGCCCTGATTGCCCT  
GCGCTACCAGCTACAGCGTGGGTTGTGGTCTGGCCAAGAGCTACAATGAGCAGCGCATCAGACAGAAC  
GTGCAGGTGTTGAATTCAGTTGACTTCAGAGGAGATGAAAGCCATAGATGGCCTAAACAGAAAATGTGC  
GATATTTGACCCTTGATATTTTTGCTGGCCCCCTAATTATCCATTTTCTGATGAATAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG209081 representing NM\_205845  
 Red=Cloning site Green=Tags(s)

MDSKYQCVKLNDGHFMPVLGFGTYAPAEVPKSKALEAVKLAIEAGFHHIDSAHVYNNEEQVGLAIRSKIA  
 DGSVKREDIFYTSKLWSNSHRPELVRPALERSLKNLQLDYVDLYLIHFVSVKPGEEVIPKDENGKILFD  
 TVDLCATWEAMEKCKDAGLAKSIGVSNFNHRLLEMILNKPGLKYKPVCNQVECHPYFNQRKLLDFCKSKD  
 IVLVAYSALGSHREEPWVDPNSPVLLLEDPVLCALAKKHKRTPALIALRYQLQRGVVVLAKSYNEQRIRQN  
 VQVFEFQLTSEEMKAIDGLNRNRYLTLDFAGPPNYPFSEY

TRTRPLE - GFP Tag - V

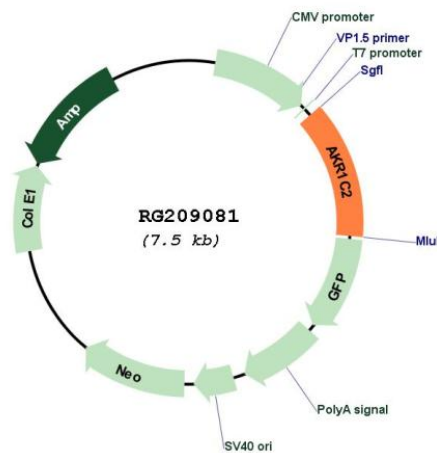
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**Plasmid Map:**



**ACCN:** NM\_205845

**ORF Size:** 969 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_205845.1</a> , <a href="#">NP_995317.1</a>
<b>RefSeq Size:</b>	1563 bp
<b>RefSeq ORF:</b>	972 bp
<b>Locus ID:</b>	1646
<b>UniProt ID:</b>	<a href="#">P52895</a>
<b>Cytogenetics:</b>	10p15.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Metabolism of xenobiotics by cytochrome P450
<b>Gene Summary:</b>	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]