

## Product datasheet for SC315506

### Constitutive androstane receptor (NR1I3) (NM\_001077470) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Constitutive androstane receptor (NR1I3) (NM_001077470) Human Untagged Clone
Tag:	Tag Free
Symbol:	Constitutive androstane receptor
Synonyms:	CAR; CAR1; MB67
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC315506 representing NM_001077470. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCTGCCTAAGAGAAGCAGGAGAACAGTCAGCAAAAGCATTGGTCCCACCTGCCCTTTGCTGGAAGC
TGTGAAGTCAGCAAGACTCAGAGGCGCCACTGCCAGCCTGCAGGTTGCAGAAGTGCTTAGATGCTGGC
ATGAGGAAAGACATGATACTGTCGGCAGAAGCCCTGGCATTGCGGCGAGCAAGCAGGCCAGCGGCGG
GCACAGCAAAACACCTGTGCAACTGAGTAAGGAGCAAGAAGAGCTGATCCGGACACTCCTGGGGGCCAC
ACCCGCCACATGGGCACCATGTTTGAACAGTTTGTGCAGTTTAGGCCTCCAGCTCATCTGTTTCATCCAT
CACCAGCCCTTGCCACCCCTGGCCCTGTGCTGCCTCTGGTCACACACTTCGAGACATCAACACTTTC
ATGGTACTGCAAGTCATCAAGTTTACTAAGGACCTGCCCGTCTTCCGTTCCCTGCCATTGAAGACCAG
ATCTCCCTTCTCAAGGGAGCAGCTGTGGAATCTGTACATCGTACTCAATACCACTTTCTGTCTCCAA
ACACAAAACCTTCTCTGCGGGCCTCTTCGCTACACAATTGAAGATGGAGCCCGTGACCGACCTGGAGTT
ACCCAGAGAGATGAGATTGATCAGCTGCAAGAGGAGATGGCACTGACTCTGCAAAGCTACATCAAGGGC
CAGCAGCGAAGGCCCCGGGATCGGTTTCTGTATGCGAAGTTGCTAGGCCTGCTGGCTGAGCTCCGGAGC
ATTAATGAGGCCTACGGGTACCAATCCAGCACATCCAGGGCCTGTCTGCCATGATGCCGCTGCTCCAG
GAGATCTGCAGCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
  
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Restriction Sites:	SgfI-MluI
ACCN:	NM_001077470
Insert Size:	843 bp


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<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<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>	<u><a href="#">NM_001077470.2</a></u>
<b>RefSeq Size:</b>	1130 bp
<b>RefSeq ORF:</b>	843 bp
<b>Locus ID:</b>	9970
<b>UniProt ID:</b>	<u><a href="#">Q14994</a></u>
<b>Cytogenetics:</b>	1q23.3
<b>Protein Families:</b>	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors
<b>MW:</b>	31.9 kDa

**Gene Summary:**

This gene encodes a member of the nuclear receptor superfamily, and is a key regulator of xenobiotic and endobiotic metabolism. The protein binds to DNA as a monomer or a heterodimer with the retinoid X receptor and regulates the transcription of target genes involved in drug metabolism and bilirubin clearance, such as cytochrome P450 family members. Unlike most nuclear receptors, this transcriptional regulator is constitutively active in the absence of ligand but is regulated by both agonists and inverse agonists. Ligand binding results in translocation of this protein to the nucleus, where it activates or represses target gene transcription. These ligands include bilirubin, a variety of foreign compounds, steroid hormones, and prescription drugs. In addition to drug metabolism, the CAR protein is also reported to regulate genes involved in glucose metabolism, lipid metabolism, cell proliferation, and circadian clock regulation. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2020]

Transcript Variant: This variant (11), also known as SV-3, lacks two alternate in-frame exons and uses an alternate splice site, compared to variant 1. The resulting protein (isoform 11) is shorter, uses an upstream start codon, and has a distinct N-terminus, compared to isoform 1.