

Product datasheet for **SC315519**

Constitutive androstane receptor (NR1I3) (NM_001077471) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Constitutive androstane receptor (NR1I3) (NM_001077471) 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:	>NCBI ORF sequence for NM_001077471, the custom clone sequence may differ by one or more nucleotides ATGGCCAGTAGGGAAGATGAGCTGAGGAACTGTGTGGTATGTGGGGACCAAGCCACAGGC TACCACHTTAATGCGCTGACTTGTGAGGGCTGCAAGGGTTTCTTCAGGAGAACAGTCAGC AAAAGCATTGGTCCCACCTGCCCTTTGCTGGAAGCTGTGAAGTCAGCAAGACTCAGAGG CGCCACTGCCAGCCTGCAGTTGCAGAAGTGCTTAGATGCTGGCATGAGGAAAGACATG ATACTGTCGGCAGAAGCCCTGGCATTGCGGCGAGCAAAGCAGGCCAGCGGCGGGCAG CAAACACCTGTGCAACTGAGTAAGGAGCAAGAAGAGCTGATCCGGACACTCCTGGGGGCC CACACCCGCCACATGGGCACCATGTTTGAACAGTTTGTGCAGTTTAGGCCTCCAGCTCAT CTGTTCCATCCATACCAGCCCTTGCCACCCCTGGCCCTGTGCTGCCTCTGGTCACACAC TTCGCAGACATCAACACTTTCATGGTACTGCAAGTCATCAAGTTTACTAAGGACCTGCC GTCTTCCGTTCCCTGCCATTGAAGACCAGATCTCCCTTCTCAAGGGAGCAGCTGTGAA ATCTGTACATCGTACTCAATACCACTTCTGTCTCCAAACACAAAATTCTCTGCGGG CCTCTTCGCTACACAATTGAAGATGGAGCCCGTGACCGACCTGGAGTTACCCAGAGAGAT GAGATTGATCAGCTGCAAGAGGAGATGGCACTGACTCTGCAAAGCTACATCAAGGCCAG CAGCGAAGGCCCGGGATCGGTTTCTGTATGCGAAGTTGCTAGGCCTGCTGGCTGAGTC CGGAGCATTAAATGAGGCCTACGGGTACCAAATCCAGCACATCCAGGGCCTGTCTGCCATG ATGCCGCTGCTCCAGGAGATCTGCAGC
Restriction Sites:	Please inquire
ACCN:	NM_001077471



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OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 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.

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.

RefSeq: [NM_001077471.1](#), [NP_001070939.1](#)

RefSeq Size: 1264 bp

RefSeq ORF: 930 bp

Locus ID: 9970

UniProt ID: [Q14994](#)

Cytogenetics: 1q23.3

Protein Families: Druggable Genome, Nuclear Hormone Receptor, Transcription Factors

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 (5), also known as SV-5 or CAR3, lacks an alternate in-frame exon and uses an alternate splice site, compared to variant 1. The resulting protein (isoform 5) is shorter than isoform 1.