

## Product datasheet for **SC316986**

### NCOA2 (NM\_006540) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NCOA2 (NM_006540) Human Untagged Clone
Tag:	Tag Free
Symbol:	NCOA2
Synonyms:	bHLHe75; GRIP1; KAT13C; NCoA-2; SRC2; TIF2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene ORF sequence for NM\_006540 edited  
 CCGAGCCGATTTCTCTTGGATTTGGCTACACACTTATAGATCTTCTGCACTGTTTACAGG  
 CACAGTTGCTGATATGTGTTCAAGATGAGTGGGATGGGAGAAAATACCTCTGACCCCTCC  
 AGGGCAGAGACAAGAAAGCGCAAGGAATGTCCTGACCACTTGGACCCAGCCCCAAAAGG  
 AACACTGAAAAACGTAATCGTGAACAGGAAAATAATATATAGAAGAACTTGCAAGTTG  
 ATTTTTGCAAAATTTAATGATATAGACAACTTTAACTTCAAACCTGACAAATGTGCAATC  
 TTTAAAAGAACTGTGAAGCAAATTCGTCAGATCAAAGAACAAGAGAAAGCAGCAGCTGCC  
 AACATAGATGAAGTGCAGAAGTCAGATGTATCCTCTACAGGGCAGGGTGCATCGACAAG  
 GATGCGCTGGGGCCTATGATGCTTGAGGCCCTTGATGGGTTCTTCTTTGTAGTGAACCTG  
 GAAGGCAACGTTGTGTTGTGTCAGAGAATGTGACACAGTATCTAAGGTATAACCAAGAA  
 GAGCTGATGAACAAAAGTGTATATAGCATCTTGCATGTTGGGGACCACACGGAATTTGTC  
 AAAAACCTGCTGCCAAAGTCTATAGTAAATGGGGATCTTGGTCTGGCGAACCTCCGAGG  
 CGGAACAGCCATACCTTCAATTGTCGGATGCTGGTAAAACCTTTACCTGATTCAGAAGAG  
 GAGGGTCATGATAACCAGGAAGCTCATCAGAAATATGAACTATGCAGTGCCTTCGCTGTC  
 TCTCAACCAAAGTCCATCAAAGAAGAAGGAGAAGATTTGCAGTCTGCTTGATTTGCGTG  
 GCAAGAAGAGTTCCTATGAAGGAAAGACCAGTTCTTCCCTCATCAGAAAGTTTACTACT  
 CGCCAGGATCTCCAAGGCAAGATCACGTCTCTGGATACCAGCACCATGAGAGCAGCCATG  
 AAACCAGGCTGGGAGGACCTGGTAAGAAGGTGTATTGAGAAGTCCATGCGCAGCATGAA  
 GGAGAATCTGTCTCTATGCTAAGAGGCATCATCATGAAGTACTGAGACAAGGATTGGCA  
 TTCAGTCAAATCTATCGTTTTTCCCTTGTCTGATGGCACTCTTGTGCTGCACAAACGAAG  
 AGCAAACTCATCCGTTCTCAGACTACTAATGAACCTCAACTTGTAAATATCTTTACATATG  
 CTTACAGAGAGCAGAATGTGTGTGTGATGAATCCGGATCTGACTGGACAACAGATGGGG  
 AAGCCACTGAATCCAATTAGCTTAACAGCCCTGCCATCAGGCCCTGTGCAGTGGGAAC  
 CCAGGTGAGGACATGACCCTCAGTAGCAATATAAATTTTCCATAAAATGGCCCAAAGGAA  
 CAAATGGGCATGCCATGGGCAGGTTTGGTGGTCTGGGGGAATGAACCATGTGTCAGGC  
 ATGCAAGCAACCACTCCTCAGGGTAGTAACTATGCACTCAAATGAACAGCCCTCACAA  
 AGCAGCCCTGGCATGAATCCAGGACAGCCACCTCCATGCTTTCACCAAGGCATCGCATG



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AGCCCTGGAGTGGCTGGCAGCCCTCGAATCCCACCCAGTCAGTTTTCCCCTGCAGGAAGC  
 TTGCATCCCCTGTGGGAGTTTGCAGCAGCACAGGAAATAGCCATAGTTATACCAACAGC  
 TCCCTCAATGCACTTCAGGCCCTCAGCGAGGGGCACGGGGTCTCATTAGGGTCATCGTTG  
 GCTTCACCAGACCTAAAAATGGGCAATTTGCAAACTCCCCAGTTAATATGAATCCTCCC  
 CCACTCAGCAAGATGGGAAGCTTGGACTCAAAGACTGTTTTGGACTATATGGGGAGCCC  
 TCTGAAGGTAACTGGACAAGCAGAGAGCAGCTGCCATCCTGGAGAGCAAAAGGAAACA  
 AATGACCCCAACTGCCCGGCCGTGAGCAGTGAGAGAGCTGACGGGCAGAGCAGACTG  
 CATGACAGCAAAAGGGCAGACCAAACCTCCTGCAGCTGCTGACCACAAATCTGATCAGATG  
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 TCAGTTGACAAGCAAGCCATCATCAATGACCTCATGCAACTCACAGCTGAAAACAGCCCT  
 GTCACACCTGTTGGAGCCAGAAAACAGCACTGCGAATTTACAGAGCACTTTTAATAAC  
 CCACGACCAGGGCAACTGGGCAGGTTATTGCCAAACCAGAATTTACCACTTGACATCACA  
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 GTGATACCTCAGCCAGGAATGATGGTAATCAAGGGATGATAGGAAACCAAGGAAATTTA  
 GGAACAGTAGCACAGGAATGATTGGTAACAGTGCTTCTCGGCCACTATGCCATCTGGA  
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 AGCAGCCAGCCTGGCCAAAGACAGACGCTTCAGTCTCAGGTATGAATATAGGGCCATCT  
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 ACTGCCCATGGCCTGAAAGCATCCTGCCTATAGACCAGGCGTCTTTTGCAGCCAAAAC  
 AGGCAGCCATTTGGCAGTTCTCCAGATGACTTGCTATGTCCACATCCTGCAGCTGAGTCT  
 CCGAGTGATGAGGGAGCTCCTGGACCAGCTGTATCTGGCCTTGGGAATTTTGATGGC  
 CTGGAGGAGATTGATAGACCTTAGGAATACCCGAACTGGTCAGCCAGAGCCAAGCAGTA  
 GATCCAGAACAGTTCTCAAGTCAGGATTCCAACATCATGCTGGAGCAGAAGGCGCCGTT  
 TTCCCACAGCAGTATGCATCTCAGGCACAAATGGCCAGGGTAGCTATTCTCCCATGCAA  
 GATCCAACTTTACACCATGGGACAGCGGCTAGTTATGCCCACTCCGTATGCAGCCC  
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 CTTCAGCATCGCTCCAAGCACAGCAGAATCGCCAGCCACTTATGAATCAATCAGCAAT  
 GTTTCCAATGTGAACCTGACTCTGAGGCCTGGAGTACCAACACAGGCACCTATTAATGCA  
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 ACACCAAGCATGGTGGCTCCTAGTGGTATCCCAGCAACTATGAGCAACCCTCGGATTCCC  
 CAGGCAAATGCACAGCAGTTTCCATTTCTCCAACACTACGGAATAAGTCAGCAACCTGAT  
 CCAGGCTTTACTGGGCTACGACTCCCCAGAGCCACTTATGTCACCCGAATGGCACAT  
 ACACAGAGTCCCATGATGCAACAGTCTCAGGCCAACCCAGCCTATCAGGCCCCCTCCGAC  
 ATAAATGGATGGGCGCAGGGGAACATGGGCGGAAACAGCATGTTTTCCAGCAGTCCCCA  
 CCACACTTTGGGAGCAAGCAACACCAGCATGTACAGTAACAACATGAACATCAATGTG  
 TCCATGGCGACCAACACAGGTGGCATGAGCAGCATGAACCAGATGACAGGACAGATCAGC  
 ATGACCTCAGTGACCTCCGTGCCTACGTGAGGGTGTCTCCATGGTCCCGAGCAGGTT  
 AATGATCCTGCTCTGAGGGGAGGCAACCTGTTCCAAACCAGCTGCCTGGAATGGATATG  
 ATTAAGCAGGAGGAGACACAACACGAAATATTGCTGCACTGCTGAAGCCAGTTGCTT  
 CTTGAGCTGACCGGGCTCACTTGCTCAAAACACTTCCAGTCTGGAGAGCTGTGTCTATTT  
 GTTTCAACCCAACTGACCTGCCA

<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_006540
<b>Insert Size:</b>	4600 bp
<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	There is 1 nucleotide difference between the OriGene clone and the NCBI reference ORF of NM_006540.2 which changes the protein from a MET to a Ile at 4008bp. OriGene considers this to be a polymorphism and to reflect the natural differences between individuals.
<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_006540.2</a> , <a href="#">NP_006531.1</a>
<b>RefSeq Size:</b>	6157 bp
<b>RefSeq ORF:</b>	4395 bp
<b>Locus ID:</b>	10499
<b>UniProt ID:</b>	<a href="#">Q15596</a>
<b>Cytogenetics:</b>	8q13.3
<b>Domains:</b>	PAS, HLH
<b>Protein Families:</b>	Druggable Genome

**Gene Summary:**

The protein encoded by this gene functions as a transcriptional coactivator for nuclear hormone receptors, including steroid, thyroid, retinoid, and vitamin D receptors. The encoded protein acts as an intermediary factor for the ligand-dependent activity of these nuclear receptors, which regulate their target genes upon binding of cognate response elements. This gene has been found to be involved in translocations that result in fusions with other genes in various cancers, including the lysine acetyltransferase 6A (KAT6A) gene in acute myeloid leukemia, the ETS variant 6 (ETV6) gene in acute lymphoblastic leukemia, and the hes related family bHLH transcription factor with YRPW motif 1 (HEY1) gene in mesenchymal chondrosarcoma. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Variants 1, 2 and 3 all encode isoform a.