

## Product datasheet for **SC123863**

### HNF 4 alpha (HNF4A) (NM\_000457) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HNF 4 alpha (HNF4A) (NM_000457) Human Untagged Clone
Tag:	Tag Free
Symbol:	HNF 4 alpha
Synonyms:	FRTS4; HNF4; HNF4a7; HNF4a8; HNF4a9; HNF4alpha; MODY; MODY1; NR2A1; NR2A21; TCF; TCF-14; TCF14
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

>OriGene ORF sequence for NM\_000457 edited  
 AATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCG  
 TCAGAATTTTGTAAACGACTACTATAGGGCGGCCGGAATTCGGCACGAGAGAGGGCA  
 CTGGGAGGAGGACAGTGGGAGGGCGGAGGGCGGGGGCTTCGGGGTGGGCGCCAGGGTAG  
 GGCAGGTGGCCGCGGCGTGGAGGCAGGGAGAATGCGACTCTCCAAAACCTCGTCGACAT  
 GGACATGGCCGACTACAGTGTGCACTGGACCCAGCCTACACCACCCTGGAATTTGAGAA  
 TGTGCAGGTGTTGACGATGGGCAATGACACGTCCCCATCAGAAGGCACCAACCTCAACGC  
 GCCAACAGCCTGGGTGTACGCGCCTGTGTGCCATCTGCGGGGACCGGGCCACGGGCAA  
 ACACTACGGTGCCTCGAGCTGTGACGGCTGCAAGGGCTTCTCCGGAGGAGCGTGCAGAA  
 GAACCACATGTAATCCTGCAGATTTAGCCGGCAGTGCCTGGTGGACAAAGACAAGAGGAA  
 CCAGTGGCCTACTGCAGGCTCAAGAAATGCTTCCGGGCTGGCATGAAGAAGGAAGCCGT  
 CCAGAATGAGCGGGACCGGATCAGCACTCGAAGGTCAAGCTATGAGGACAGCAGCCTGCC  
 CTCCATCAATGCGCTCCTGCAGGCGGAGTCTGTCCCGACAGATCACCTCCCCGCTCTC  
 CGGGATCAACGGGACATTCGGGCGAAGAAGATTGCCAGCATCGCAGATGTGTGTGAGTC  
 CATGAAGGAGCAGCTGCTGGTTCTCGTTGAGTGGGCCAAGTACATCCCAGCTTTCTGCGA  
 GCTCCCCCTGGACGACAGGTGGCCCTGCTCAGAGCCCATGCTGGCGAGCACCTGCTGCT  
 CGGAGCCACCAAGAGATCCATGGTGTTC AAGGACGTGCTGCTCCTAGGCAATGACTACAT  
 TGTCCCTCGGCACTGCCCGAGCTGGCGGAGATGAGCCGGGTGTCCATACGCATCCTTGA  
 CGAGTGGTGTGCCCTTCCAGGAGCTGCAGATCGATGACAAATGAGTATGCCTACCTCAA  
 AGCCATCATCTTCTTTGACCCAGATGCCAAGGGCTGAGCGATCCAGGGAAGATCAAGCG  
 GCTGCGTTCACAGGTGCAGGTGAGCTTGGAGGACTACATCAACGACCGCCAGTATGACTC  
 GCGTGGCCGCTTTGGAGAGCTGCTGCTGCTGCCACCTTGCAGAGCATCACCTGGCA  
 GATGATCGAGCAGATCCAGTTCATCAAGCTCTTCCGCATGGCCAAGATTGACAACCTGTT  
 GCAGGAGATGCTGCTGGGAGGGTCCCCAGCGATGCACCCATGCCACCACCCCTGCA  
 CCCTCACCTGATGCAGGAACATATGGGAACCAACGTATCGTTGCCAACCAATGCCAC  
 TCACCTCAGAACGACAGATGTGTGAGTGGCCCCGACCCAGGGGACAGGCAGCCACCCC  
 TGAGACCCACAGCCCTCACCGCAGGTGGCTCAGGGTCTGAGCCCTATAAGCTCCTGCC  
 GGGAGCCGTCGCCACAATCGTCAAGCCCTCTCTGCCATCCCCAGCCGACCATCACCAA  
 GCAGGAAGTTATCTAGCAAGCCGCTGGGGCTTGGGGCTCCACTGGCTCCCCCAGCCCC  
 CTAAGAGAGCACCTGGTATCACGTGGTCACGGCAAAGGAAGACGTGATGCCAGGACCAG  
 TCCCAGAGCAGGAATGGGAAGGATGAAGGGCCCGAGAACATGGCCTAAGGGCCACATCCC  
 ACTGCCACCTTACGCCCTGCTCTGGATAACAAGACTTTGACTTGGGGAGACCTTACT  
 GCCTTGGACAACCTTTCTCATGTTGAAGCCACTGCCTTACCTTACCTTATCCATGTC  
 CAACCCCGACTTCATCC

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000457 unedited  
 CGCTCATTCTGGACGGCTTCTTCTTCATGCCAGCCCGGAAGCATTCTTGTAGCCTGCAG  
 TAGCGGCACTGGTTCTTCTTGTCTTTGTCCACCACGCACTGCCGGCTAAATCTGCAGGAG  
 TACATGTGGTTCTTCCGCACGCTCCTCCGGAAGAAGCCCTTGCAGCCGTACAGCTCGAG  
 GCACCGTAGTGTTGCCCCGTGGCCCGTCCCCGAGATGGCACACAGGGCGCTGACACCC  
 AGGCTGTTGGGCGGTTGAGGTTGGTGCCTTCTGATGGGGACGTGTCATTGCCCATCGTC  
 AACACCTGCACATTCTCAAATTCAGGGTGGTGTAGGCTGGGTCCAGTGCAGCACTGTAG  
 TCGGCCATGTCCATGTGACGAGGGTTTTGGAGAGTCGATTCTCCCTGCCTCCACGCCG  
 CGGCCACCTGCCCTACCCTGGGCGCCACCCCGAAGGCCCCCGCCCTCCGCCCTCCCACT  
 GCCTCCTCCCACTGCCCTCTCTCGTGCCGAATTCGCGGCCGCCCTATAGTGAGTCGTATT  
 ACAAAATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGC  
 CTACCGCCCATTTGCGTCAACGGGGCGGGGTTATTACGACATTTTGGAAAGTCCCCTTGA  
 TTTTGGTGCCAAAACAACCTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGT  
 GAGTCANACCGCTATCCACGC

<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_000457 unedited  GGAGAGGCACTGGGGAGGGGTCACAGGGATGCCACCCGGGATCTGTTTCAGGAAACAGCTA  TGACCCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCTCC  TTAATATTTATCAGCAAACAGGATGCTCGACCCTAAGTGAATTTTAGTGCAGCCTCAGGC  CAATCTTGGTCTGGGAGTGGGCAGGGTCCCAGAAGAACGAGTCTGGTTTCTGAGGCTG  TAGAAGGGAGCCGGAAGCCCTCAACTTGATCACGGTGAGAACACAGGGAGCCTTTGGAG  AAGCTATTCAGCCACTGTAGTTAAGAGCTCCTGTTCTGATCCAGGGAGACCTGGGTTCAA  GTCCTGACTCAGCCACTTCTAGTTGTGTGAGTTTCAGAAAAAATCACTTCACCTCTT  AGAACGCAATTTAGCTTCTGTAACAATCTCTAGGTTAGGAGGGAGTGGGGCGGGTGAGG  GCGGGGAGGGAGGAGGAGAATAAAAAACAAAACAATCTCTAGGTTAATAGGGAGGAAGG  GAGGATTAATGAGATGATGCATGTCAGATGCCTTAAGACAGTGCCTGGGAGTAAGGAAG  AGCTTGAGACAGGCCCTGGGAGCTTATTCCTCCTGGATGTCACTCTGATGTGAGGGTTTA  CCCATCTGTCTCTCCAGCCCAAGCCTCATTACTCTCACCCACATTATATCATCCACC  CCACCTGACCTCCAGCTTC</p>
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_000457
<b>Insert Size:</b>	3300 bp
<b>OTI Disclaimer:</b>	<p>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.</p> <p>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></p>
<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>	<a href="#">NM_000457.3</a> , <a href="#">NP_000448.3</a>

RefSeq Size:	3239 bp
RefSeq ORF:	1425 bp
Locus ID:	3172
UniProt ID:	<a href="#">P41235</a>
Cytogenetics:	20q13.12
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Nuclear Hormone Receptor, Transcription Factors
Protein Pathways:	Maturity onset diabetes of the young
Gene Summary:	<p>The protein encoded by this gene is a nuclear transcription factor which binds DNA as a homodimer. The encoded protein controls the expression of several genes, including hepatocyte nuclear factor 1 alpha, a transcription factor which regulates the expression of several hepatic genes. This gene may play a role in development of the liver, kidney, and intestines. Mutations in this gene have been associated with monogenic autosomal dominant non-insulin-dependent diabetes mellitus type I. Alternative splicing of this gene results in multiple transcript variants encoding several different isoforms. [provided by RefSeq, Apr 2012]</p> <p>Transcript Variant: This variant (2) encodes the longest isoform (2, also known as HNF4alpha2). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>