

## Product datasheet for **RC216588**

### **HNF 4 alpha (HNF4A) (NM\_001030004) Human Tagged ORF Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | HNF 4 alpha (HNF4A) (NM_001030004) Human Tagged ORF Clone                                      |
| Tag:                      | Myc-DDK  |
| Symbol:                   | HNF4A  |
| Synonyms:                 | FRTS4; HNF4; HNF4a7; HNF4a8; HNF4a9; HNF4alpha; MODY; MODY1; NR2A1; NR2A21; TCF; TCF-14; TCF14 |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)   |
| E. coli Selection:        | Kanamycin (25 ug/mL)   |



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**ORF Nucleotide Sequence:**

>RC216588 representing NM\_001030004  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTCAGCGTGAACCGCCCCCTCGGGGCTCCAGTGGAGAGTTCTTACGACACGTCCCCATCAGAAGGCA  
 CCAACCTCAACGCGCCCAACAGCCTGGGTGTACGCGCCCTGTGTGCCATCTGCGGGGACCGGCCACGGG  
 CAAACACTACGGTGCCTCGAGCTGTGACGGCTGCAAGGGCTTCTCCGGAGGAGCGTGCGGAAGAACCAC  
 ATGTACTCCTGCAGATTTAGCCGGCAGTGCCTGGTGGACAAAGACAAGAGGAACCAGTGCCTACTGCA  
 GGCTCAAGAAATGCTTCCGGGCTGGCATGAAGAAGGAAGCCGTCAGAAATGAGCGGGACCGGATCAGCAC  
 TCGAAGGTCAAGCTATGAGGACAGCAGCCTGCCCTCCATCAATGCGCTCCTGCAGCGGAGGTCTGTCC  
 CGACAGATCACCTCCCCGTCTCCGGGATCAACGGCGACATTCCGGCGAAGAAGATTGCCAGCATCGCAG  
 ATGTGTGTGAGTCCATGAAGGAGCAGCTGCTGGTTCTCGTTGAGTGGGCCAAGTACATCCAGCTTTCTG  
 CGAGCTCCCCCTGGACGACCAGGTGGCCCTGCTCAGAGCCATGCTGGCGAGCACCTGCTGCTCGGAGCC  
 ACCAAGAGATCCATGGTGTTCAGGACGTGCTGCTCCTAGGCAATGACTACATTGCTCCCTCGGCACTGCC  
 CGGAGCTGGCGGAGATGAGCCGGGTGCCATACGCATCCTTGACGAGCTGGTGTGCCCTTCCAGGAGCT  
 GCAGATCGATGACAATGAGTATGCCTACCTCAAAGCCATCATCTTCTTTGACCCAGATGCCAAGGGGCTG  
 AGCGATCCAGGGAAGATCAAGCGGCTGCGTTCCAGGTGCAGGTGAGCTTGGAGGACTACATCAACGACC  
 GCCAGTATGACTCGCGTGGCCGCTTTGGAGAGCTGCTGCTGCTGCCACCTTGACAGAGCATCACCTG  
 GCAGATGATCGAGCAGATCCAGTTCATCAAGCTCTTCGGCATGGCCAAGATTGACAACCTGTTGCAGGAG  
 ATGCTGCTGGGAGGTCCGTGCCAAGCCCAGGAGGGCGGGGTTGGAGTGGGGACTCCCAGGAGACAGGC  
 CTCACACAGTGAAGTCAACCCCTCAGCTCCTTGGCTTCCCCTGTGCCGCTTTGGCAAGTTGCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC216588 representing NM\_001030004  
 Red=Cloning site Green=Tags(s)

MVSVNAPLGAPVESSYDTSPSEGTNLNAPNSLGVSAICGDRATGKHYGASSCDGCKGFFRRSVRKNH  
 MYSCRFSRQCVDKDKRNQCRCYRLLKCFRAGMKKEAVQNERDRISTRSSYEDSSLPSINALLQAEVLS  
 RQITSPVSGINGDIRAKKIASIADVCEMKEQLLVLEWAKYIPAFCELPLDDQVALLRAHAGEHLLLGA  
 TKRSMVFKDVLVLLGNDYIVPRHCPPELAEMSRVSIKILDELVLPFQELQIDDNEYAYLKAIIFDPDAKGL  
 SDPGKIKRLRSQVQSLEDYINDRQYDSRGRFGELLLLLPTLQSIWQMIEQIQFIKLFMAKIDNLLQE  
 MLLGGPCQAQEGRGWSDSPGDRPHTVSSPLSSLASPLCRFGQVA

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

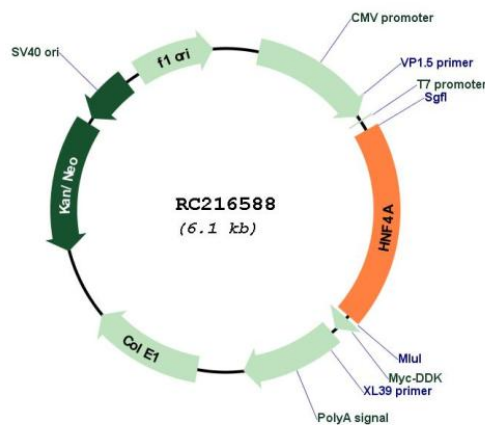
**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6506\\_b12.zip](https://cdn.origene.com/chromatograms/mk6506_b12.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_001030004

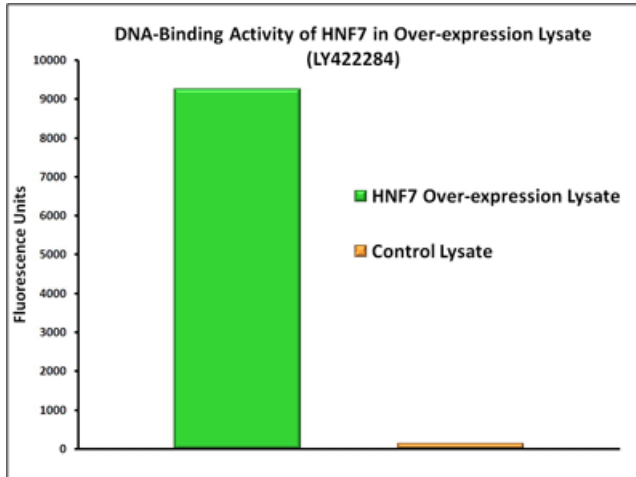
**ORF Size:** 1185 bp

**OTI Disclaimer:** 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](#)

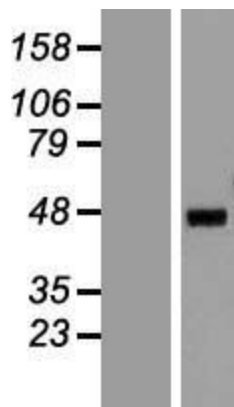
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

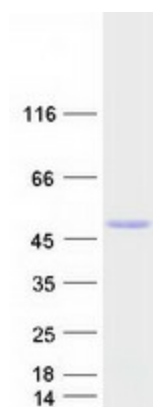
|                               |  |
|-------------------------------|--|
| <b>Reconstitution Method:</b> | <ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate 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_001030004.3</a>   |
| <b>RefSeq Size:</b>           | 1192 bp  |
| <b>RefSeq ORF:</b>            | 1188 bp  |
| <b>Locus ID:</b>              | 3172   |
| <b>UniProt ID:</b>            | <a href="#">P41235</a>   |
| <b>Cytogenetics:</b>          | 20q13.12   |
| <b>Protein Families:</b>      | Druggable Genome, ES Cell Differentiation/IPS, Nuclear Hormone Receptor, Transcription Factors   |
| <b>Protein Pathways:</b>      | Maturity onset diabetes of the young   |
| <b>MW:</b>                    | 43.8 kDa   |
| <b>Gene Summary:</b>          | 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] |

**Product images:**

DNA-binding activity of HNF7 was measured in OriGene over-expression lysate [LY422284] and a control lysate. Three microliters of each lysate was tested with a transcription factor binding assay utilizing HNF7-specific DNA sequences. The high level of activity observed in the over-expression lysate compared to the control lysate demonstrates that the expressed HNF7 is biologically active in the lysate. Overexpression cell lysates are prepared from HEK293T cells transfected with RC216588 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Western blot validation of overexpression lysate (Cat# [LY422284]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216588 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HNF4A protein (Cat# [TP316588]). The protein was produced from HEK293T cells transfected with HNF4A cDNA clone (Cat# RC216588) using MegaTran 2.0 (Cat# [TT210002]).