

## Product datasheet for **RC204453**

### **HNF1 beta (HNF1B) (NM\_000458) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	HNF1 beta (HNF1B) (NM_000458) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HNF1 beta
Synonyms:	ADTKD3; FJHN; HNF-1-beta; HNF-1B; HNF1beta; HNF2; HPC11; LF-B3; LFB3; MODY5; RCAD; T2D; TCF-2; TCF2; VHNF1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC204453 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTGTCCAAGCTCACGTCGCTCCAGCAAGAAGCTCTGAGCGCCCTGCTGAGCTCCGGGTACCAAGG  
 AGGTGCTGGTTACAGCCCTTGAGGAGTTGCTGCCATCCCCGAAGCTCGGGGTGAAGCTGGAGACGCTGCC  
 CCTGTCCCTGGCAGCGGGCCGAGCCCGACCAAGCCGGTCTTCCATACTCTACCAACGCGCCACGCC  
 AAGGGCCGCTTGTCCGGCAGCAGGGGCTCCGAGGACGGCGACGACTATGACACACCTCCCATCTCAAGG  
 AGCTGCAGGCGCTCAACACCGAGGAGGGCGGAGCAGCGGGCGGAGGTGGACCGGATGCTCAGTGAGGA  
 CCCTTGGAGGGCTGCTAAAATGATCAAGGGTTACATGCAGCAACACAACATCCCCAGAGGGAGGTGGTC  
 GATGTCACCGGCTGAACAGTCGCACCTCTCCAGCATCTCAACAAGGGCACCCCTATGAAGACCCAGA  
 AGCGTGCCGCTCTGTACACCTGGTACGTCAGAAAGCAACGAGAGATCCTCCGACAATTCAACCAGACAGT  
 CCAGAGTTCTGGAATATGACAGACAAAAGCAGTCAGGATCAGCTGCTGTTTCTTTCCAGAGTTCAGT  
 CAACAGAGCCATGGGCCTGGGCAGTCCGATGATGCCTGCTCTGAGCCACCAACAAGAAGATGCGCCGCA  
 ACCGGTTCAAATGGGGGCCCCGCTCCAGCAAATCTTGTACCAGGCCACGATCGGCAAAAAGAACCCAG  
 CAAGGAAGAGAGAGAGGCCTTAGTGGAGGAATGCAACAGGGCAGAATGTTTGCAGCGAGGGGTGCCCC  
 TCCAAAGCCCACGGCCTGGGCTCCAAGTGGTCACTGAGGTCCGTGCTACAAGTGGTTTCAAACCGCA  
 GGAAGGAGGAGGCATTCCGGCAAAGCTGGCCATGGACGCTATAGTCCAACAGACTCACAGCCTGAA  
 CCCTCTGCTCTCCACGGCTCCCCCACCAGCCAGCTCCTCTCCTCAAACAAGCTGTCAGGAGTG  
 CGCTACAGCCAGCAGGGAACAATGAGATCACTTCCTCCTCAACAATCAGTCACCATGGCAACAGCGCCA  
 TGGTGACCAGCCAGTCGGTTTTACAGCAAGTCTCCCAGCCAGCTGGACCCAGGCCACAATCTCCTCTC  
 ACCTGATGGTAAAATGATCTCAGTCTCAGGAGGAGGTTTTGCCCCAGTCAGCACCTTGACGAATATCCAC  
 AGCCTCTCCACCAATAATCCCCAGCAATCTCAAAACCTCATCATGACACCCCTCTCTGGAGTCATGGCAA  
 TTGCACAAAGCCTCAACACCTCCAAGCACAGAGTGTCCCTGTATCAACAGTGTGGCCGGCAGCCTGGC  
 AGCCCTGCAGCCCGTCCAGTTCTCCAGCAGCTGCACAGCCCTACCAGCAGCCCTCATGCAGCAGAGC  
 CCAGGCAGCCACATGGCCAGCAGCCCTCATGGCAGCTGTGACTCAGCTGCAGAACTCACACATGTACG  
 CACACAAGCAGGAACCCCCCAGTATCCACACCTCCCGGTTTCCATCTGCAATGGTGGTCACAGATAC  
 CAGCAGCATCAGTACACTACCAACATGTCTTCAAGTAAACAGTGCCTCTACAAGCCTGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC204453 protein sequence  
 Red=Cloning site Green=Tags(s)

MVSKLTSLQQELLSALLSSGVTKEVLVQALEELLSPNFGVKLETPLSPGSGAEPDTPKVFHTLTNGHA  
 KGRLSGDEGEDDYPPIILKELQALNTEEAQRAEVDRLSEDPWRAAKMIKGYMQHNIPQREVV  
 DVTGLNQSHLSQHLNKGTPMKTQKRAALYTWYVRKQREILRQFNQTVQSSGNMTDKSSQDQLLFLFPEFS  
 QQSHGPGQSDDACSEPTNKKMRRNRFKWGPASQQILYQAYDRQKNPSKEEREALVEECNRAECLQRGVSP  
 SKAHGLGNSLVTEVRVYNWFANRRKEEAFRQKLAMDAYSNNQTHSLNPLLSHGSPHHQPSSPPNKLSGV  
 RYSQQGNNEITSSSTISHHGNSAMVTSQSVLQQVSPASLDPGHNLLSPDGKMISVSGGGLPPVSTLTNIH  
 SLSHHNPQQSQNLIMTPLSGVMAIAQSLNNTSQAQSVPVINSVAGSLAALQPVQFSQQLHSPHQPLMQQS  
 PGMHMAQQPFMAAVTQLQNSHMYAHKQEPQYSHTSRFPSSAMVVTDTSSISTLTNMSSSKQCPLQAW

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6196\\_h02.zip](https://cdn.origene.com/chromatograms/mk6196_h02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_000458

**ORF Size:** 1671 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).

**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\\_000458.4](#)
**RefSeq Size:** 2842 bp

**RefSeq ORF:** 1674 bp

**Locus ID:** 6928

**UniProt ID:** [P35680](#)

**Cytogenetics:** 17q12

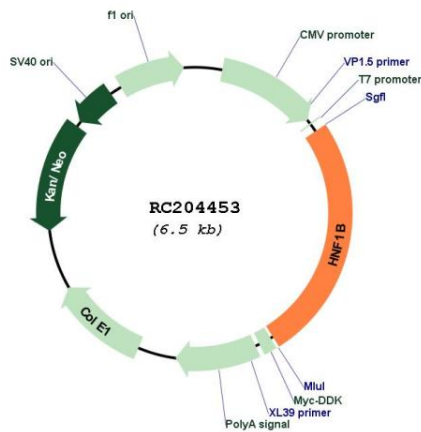
**Protein Families:** Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Transcription Factors

**Protein Pathways:** Maturity onset diabetes of the young

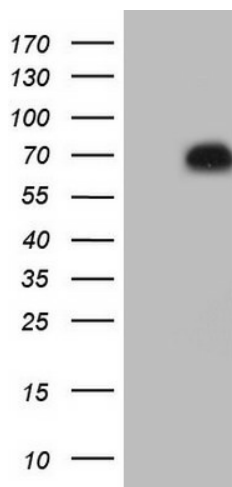
**MW:** 61.3 kDa

**Gene Summary:** This gene encodes a member of the homeodomain-containing superfamily of transcription factors. The protein binds to DNA as either a homodimer, or a heterodimer with the related protein hepatocyte nuclear factor 1-alpha. The gene has been shown to function in nephron development, and regulates development of the embryonic pancreas. Mutations in this gene result in renal cysts and diabetes syndrome and noninsulin-dependent diabetes mellitus, and expression of this gene is altered in some types of cancer. Multiple transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009]

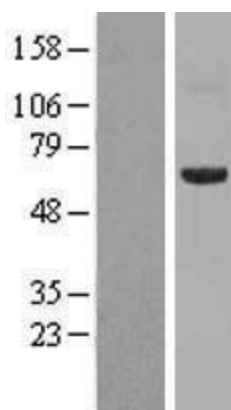
**Product images:**



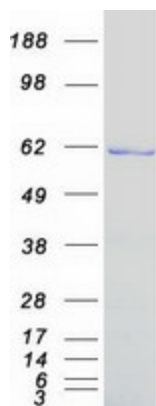
Circular map for RC204453



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HNF1B (Cat# RC204453, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HNF1B antibody (Cat# [TA890005]). Positive lysates [LY400162] (100ug) and [LC400162] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400162]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204453 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HNF1B protein (Cat# [TP304453]). The protein was produced from HEK293T cells transfected with HNF1B cDNA clone (Cat# RC204453) using MegaTran 2.0 (Cat# [TT210002]).