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Product datasheet for RC217863

HNF 4 alpha (HNF4A) (NM_000457) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HNF 4 alpha (HNF4A) (NM_000457) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HNF 4 alpha
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)

View online »

ORF Nucleotide Sequence:

>RC217863 representing NM_000457
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCGACTCTCCAAAACCCTCGTCGACATGGACATGGCCGACTACAGTGCTGCACTGGACCCAGCCTACA
CCACCCTGGAATTTGAGAATGTGCAGGTGTTGACGATGGGCAATGACACGTCCCCATCAGAAGGCACCAA
CCTCAACGCGCCCAACAGCCTGGGTGTCAGCGCCCTGTGTGCCATCTGCGGGGACCGGGCCACGGGCAAA
CACTACGGTGCCTCGAGCTGTGACGGCTGCAAGGGCTTCTTCCGGAGGAGCGTGCGGAAGAACCACATGT
ACTCCTGCAGATTTAGCCGGCAGTGCGTGGTGGACAAAGACAAGAGGAACCAGTGCCGCTACTGCAGGCT
CAAGAAATGCTTCCGGGCTGGCATGAAGAAGGAAGCCGTCCAGAATGAGCGGGACCGGATCAGCACTCGA
AGGTCAAGCTATGAGGACAGCAGCCTGCCCTCCATCAATGCGCTCCTGCAGGCGGAGGTCCTGTCCCGAC
AGATCACCTCCCCCGTCTCCGGGATCAACGGCGACATTCGGGCGAAGAAGATTGCCAGCATCGCAGATGT
GTGTGAGTCCATGAAGGAGCAGCTGCTGGTTCTCGTTGAGTGGGCCAAGTACATCCCAGCTTTCTGCGAG
CTCCCCCTGGACGACCAGGTGGCCCTGCTCAGAGCCCATGCTGGCGAGCACCTGCTGCTCGGAGCCACCA
AGAGATCCATGGTGTTCAAGGACGTGCTGCTCCTAGGCAATGACTACATTGTCCCTCGGCACTGCCCGGA
GCTGGCGGAGATGAGCCGGGTGTCCATACGCATCCTTGACGAGCTGGTGCTGCCCTTCCAGGAGCTGCAG
ATCGATGACAATGAGTATGCCTACCTCAAAGCCATCATCTTCTTTGACCCAGATGCCAAGGGGCTGAGCG
ATCCAGGGAAGATCAAGCGGCTGCGTTCCCAGGTGCAGGTGAGCTTGGAGGACTACATCAACGACCGCCA
GTATGACTCGCGTGGCCGCTTTGGAGAGCTGCTGCTGCTGCTGCCCACCTTGCAGAGCATCACCTGGCAG
ATGATCGAGCAGATCCAGTTCATCAAGCTCTTCGGCATGGCCAAGATTGACAACCTGTTGCAGGAGATGC
TGCTGGGAGGGTCCCCCAGCGATGCACCCCATGCCCACCACCCCCTGCACCCTCACCTGATGCAGGAACA
TATGGGAACCAACGTCATCGTTGCCAACACAATGCCCACTCACCTCAGCAACGGACAGATGTGTGAGTGG
CCCCGACCCAGGGGACAGGCAGCCACCCCTGAGACCCCACAGCCCTCACCGCCAGGTGGCTCAGGGTCTG
AGCCCTATAAGCTCCTGCCGGGAGCCGTCGCCACAATCGTCAAGCCCCTCTCTGCCATCCCCCAGCCGAC
CATCACCAAGCAGGAAGTTATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC217863 representing NM_000457
Red=Cloning site Green=Tags(s)

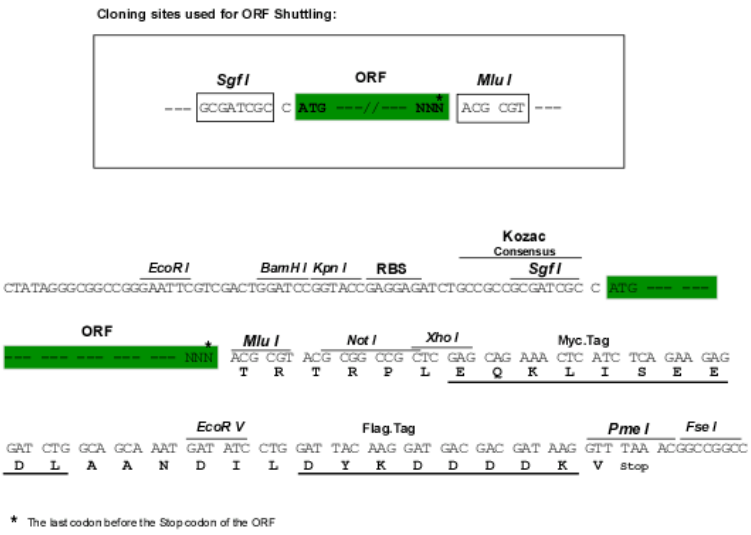
MRLSKTLVDMDMADYSAALDPAYTTLEFENVQVLTMGNDTSPSEGTNLNAPNSLGVSALCAICGDRATGK
HYGASSCDGCKGFFRRSVRKNHMYSCRFSRQCVVDKDKRNQCRYCRLKKCFRAGMKKEAVQNERDRISTR
RSSYEDSSLPSINALLQAEVLSRQITSPVSGINGDIRAKKIASIADVCESMKEQLLVLVEWAKYIPAFCE
LPLDDQVALLRAHAGEHLLLGATKRSMVFKDVLLLGNDYIVPRHCPELAEMSRVSIRILDELVLPFQELQ
IDDNEYAYLKAIIFFDPDAKGLSDPGKIKRLRSQVQVSLEDYINDRQYDSRGRFGELLLLLPTLQSITWQ
MIEQIQFIKLFGMAKIDNLLQEMLLGGSPSDAPHAHHPLHPHLMQEHMGTNVIVANTMPTHLSNGQMCEW
PRPRGQAATPETPQPSPPGGSGSEPYKLLPGAVATIVKPLSAIPQPTITKQEVI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2379_a03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000457

ORF Size: 1422 bp

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

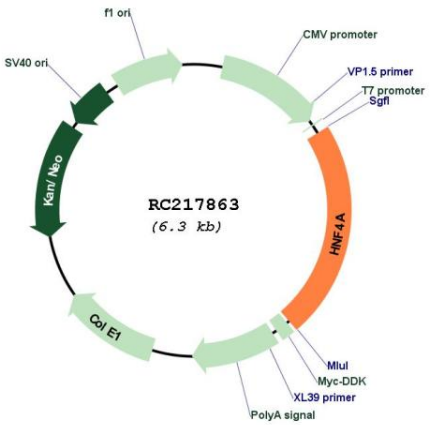
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

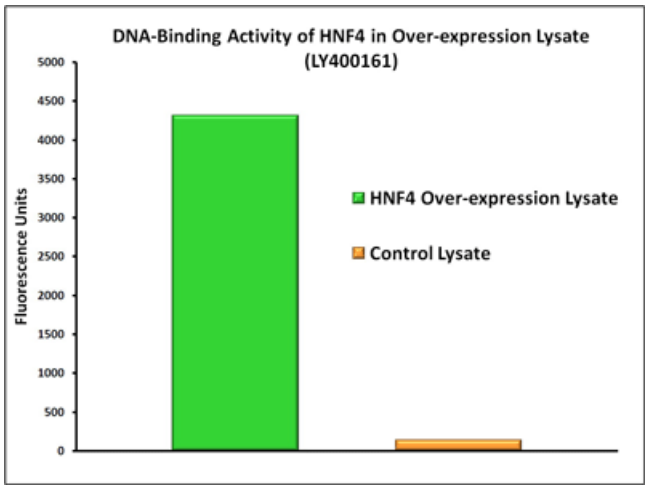
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000457.5
RefSeq Size:	4737 bp
RefSeq ORF:	1425 bp
Locus ID:	3172
UniProt ID:	P41235
Cytogenetics:	20q13.12
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Nuclear Hormone Receptor, Transcription Factors
Protein Pathways:	Maturity onset diabetes of the young
MW:	53.2 kDa
Gene Summary:	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]

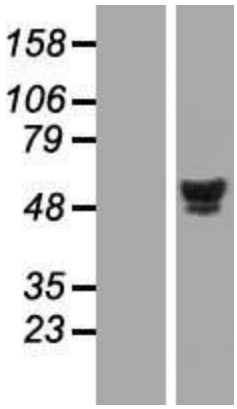
Product images:



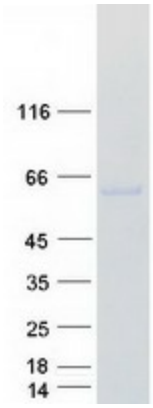
Circular map for RC217863



DNA-binding activity of HNF4 was measured in OriGene over-expression lysate [LY400161] and a control lysate. Three microliters of each lysate was tested with a transcription factor binding assay utilizing HNF4-specific DNA sequences. The high level of activity observed in the over-expression lysate compared to the control lysate demonstrates that the expressed HNF4 is biologically active in the lysate. Overexpression cell lysates are prepared from HEK293T cells transfected with RC217863 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Western blot validation of overexpression lysate (Cat# [LY400161]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217863 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HNF4A protein (Cat# [TP317863]). The protein was produced from HEK293T cells transfected with HNF4A cDNA clone (Cat# RC217863) using MegaTran 2.0 (Cat# [TT210002]).