

## Product datasheet for **RC218966**

### HIF-1 alpha (HIF1A) (NM\_181054) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HIF-1 alpha (HIF1A) (NM_181054) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HIF-1 alpha
Synonyms:	bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC218966 representing NM\_181054  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGGAGGGCGCCGCGCGCGAACGACAAGAAAAAGATAAGTTCTGAACGTCGAAAAAGAAAGTCTCGAG  
ATGCAGCCAGATCTCGGCGAAGTAAAGAATCTGAAGTTTTTTATGAGCTTGCTCATCAGTTGCCACTTCC  
ACATAATGTGAGTTCGCATCTTGATAAGGCCTCTGTGATGAGGCTTACCATCAGCTATTTGCGTGTGAGG  
AAACTTCTGGATGCTGGTATTGGATATTGAAGATGACATGAAAGCACAGATGAATTGCTTTTATTGTA  
AAGCCTTGGATGGTTTTGTATGGTTCTCACAGATGATGGTGACATGATTTACATTTCTGATAATGTGAA  
CAAATACATGGGATTAAGTCAAGTAACTGACACAGTGTGTTGATTTTACTCATCCATGTGAC  
CATGAGGAAATGAGAGAAATGCTTACACACAGAAATGGCCTTGAAAAAGGGTAAAGAACAAAACACAC  
AGCGAAGCTTTTTCTCAGAATGAAGTGTACCCTAACTAGCCGAGGAAGAACTATGAACATAAAGTCTGC  
AACATGGAAGGTATTGCACTGCACAGGCCACATTCACGTATATGATACCAACAGTAACCAACCTCAGTGT  
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AGTACAGGATGCTTGCCAAAAGAGGTGGATATGTCTGGTTGAACTCAAGCAACTGTATATAACAC  
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TATTCACCAAAGTTGAATCAGAAGATACAAGTAGCCTCTTTGACAACTTAAAGAAGAACCTGATGCTTT  
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ATAGTCCCAGTGAATATTGTTTTATGTGGATAGTGATATGGTCAATGAATCAAGTTGGAATTGGTAGA  
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ATGTTAGTCCCTATATCCCAATGGATGATGACTTCCAGTTACGTTCTTCGATCAGTTGTCACCATTAG  
AAAGCAGTCCGCAAGCCCTGAAAGCGCAAGTCTCAAAGCACAGTTACAGTATTCCAGCAGACTCAAAT  
ACAAGAACCTACTGCTAATGCCACCACTACCACTGCCACCACTGATGAATTAACAAAGTGAACAAAGAC  
CGTATGGAAGACATTAATAATTTGATTGCATCTCCATCTCCTACCCACATACATAAAGAACTACTAGTG  
CCACATCATCACCATATAGAGATACTCAAAGTCGGACAGCCTCACCAAACAGAGCAGGAAAAGGAGTCAT  
AGAACAGACAGAAAAATCTCATCCAAGAAGCCCTAACGTGTTATCTGTCGCTTTGAGTCAAAGAACTACA  
GTTCTGAGGAAGAACTAAATCCAAGATACTAGCTTTGCAGAATGCTCAGAGAAAGCGAAAAATGGAAC  
ATGATGGTTCACTTTTTCAAGCAGTAGGAATTATT

**ACGCGT**ACGCGCGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



**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](mailto: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.

**RefSeq:** [NM\\_181054.3](#)

**RefSeq Size:** 3955 bp

**RefSeq ORF:** 2208 bp

**Locus ID:** 3091

**UniProt ID:** [Q16665](#)

**Cytogenetics:** 14q23.2

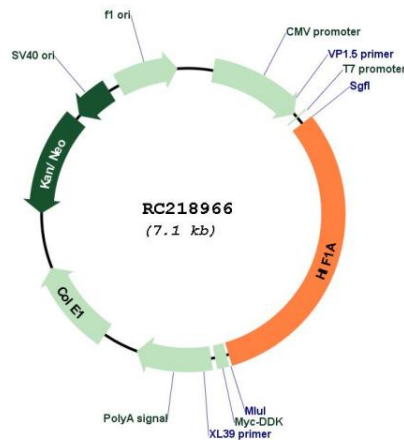
**Protein Families:** Transcription Factors

**Protein Pathways:** mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma

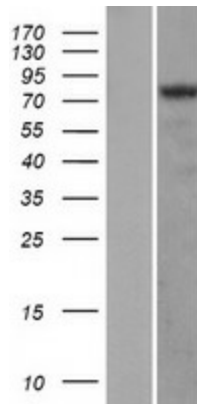
**MW:** 83.2 kDa

**Gene Summary:**

This gene encodes the alpha subunit of transcription factor hypoxia-inducible factor-1 (HIF-1), which is a heterodimer composed of an alpha and a beta subunit. HIF-1 functions as a master regulator of cellular and systemic homeostatic response to hypoxia by activating transcription of many genes, including those involved in energy metabolism, angiogenesis, apoptosis, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. HIF-1 thus plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jul 2011]

**Product images:**


Circular map for RC218966



Western blot validation of overexpression lysate (Cat# [LY403613]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218966 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).