

Product datasheet for **RC202461**

HIF-1 alpha (HIF1A) (NM_001530) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HIF-1 alpha (HIF1A) (NM_001530) 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)



[View online »](#)

ORF Nucleotide Sequence:

>RC202461 representing NM_001530
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

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Protein Sequence: >RC202461 representing NM_001530
 Red=Cloning site Green=Tags(s)

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MEGAGGANDKKKISSERRKEKSRDAARRSRKSESEVFYELAHQLPLPHNVSSHLDKASVMRLTISYLRVR
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IFSLQQTECVLKPVESSDMKMTQLFTKVESEDTSLSFDKLLKKEPDALTLAPAAAGDTIISLDFGSDTET
DDQQLEEVPLYNDVMLPSPNEKLQINLAMSPLETAETPKPLRSSADPALNQEVALKLEPNPESLELSFT
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RMEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKGVIEQTEKSHPRSPNLSVALSQRTT
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2533_c01.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001530

ORF Size: 2478 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001530.4](#)

RefSeq Size: 3958 bp

RefSeq ORF: 2481 bp

Locus ID: 3091

UniProt ID: [Q16665](#)

Cytogenetics: 14q23.2

Domains: PAS, HLH, PAC

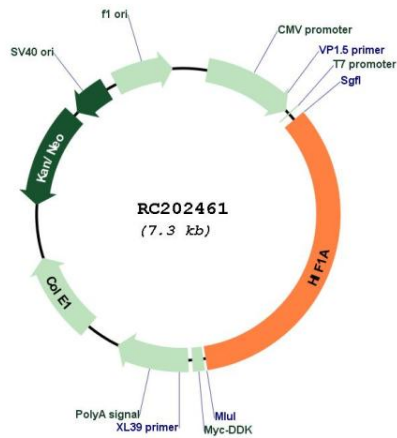
Protein Families: Transcription Factors

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

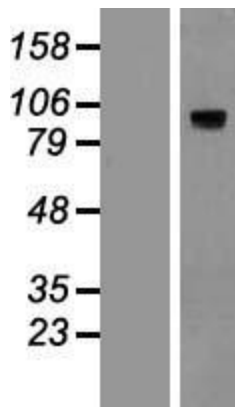
MW: 92.5 kDa

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]

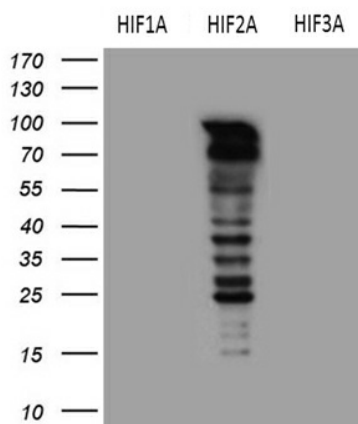
Product images:



Circular map for RC202461



Western blot validation of overexpression lysate (Cat# [LY419880]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202461 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-HIF1A (Cat# RC202461), pCMV6-EPAS1 (Cat# [RC208604]) and pCMV6-HIF3A (Cat# [RC210255]) (1:2000).