

Product datasheet for **RG218966**

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:	TurboGFP
Symbol:	HIF-1 alpha
Synonyms:	bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG218966 representing NM_181054
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGGGCGCCGCGGCCGGAACGACAAGAAAAAGATAAGTTCTGAACGTCGAAAAAGAAAGTCTCGAG
 ATGCAGCCAGATCTCGCGGAAGTAAAGAATCTGAAGTTTTTTATGAGCTTGCTCATCAGTTGCCACTTCC
 ACATAATGTGAGTTCGCATCTTGATAAGGCCTCTGTGATGAGGCTTACCATCAGCTATTTGCGTGTGAGG
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 AAGCCTTGGATGGTTTTGTTATGGTTCTCACAGATGATGGTGACATGATTTACATTTCTGATAATGTGAA
 CAAATACATGGGATTAACCTAGTTTGAACCTGACACAGTGTGTTGATTTTACTCATCCATGTGAC
 CATGAGGAAATGAGAGAAATGCTTACACACAGAAATGGCCTTGAAAAAGGGTAAAGAACAAAACACAC
 AGCGAAGCTTTTTCTCAGAATGAAGTGTACCCTAACTAGCCGAGGAAGAACTATGAACATAAAGTCTGC
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 AGTACAGGATGCTTGCCAAAAGAGGTGGATATGTCTGGTTGAACTCAAGCAACTGTATATAACAC
 CAAGAATTCTCAACCACAGTGCATTGTATGTGTGAATTACGTTGTGAGTGGTATTATTGAGCAGGACTTG
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 TATTCACCAAAGTTGAATCAGAAGATACAAGTAGCCTCTTTGACAACTTAAAGAAGAACCTGATGCTTT
 AACTTTGCTGGCCAGCCGCTGGAGACAAATCATATCTTTAGATTTTGGCAGCAACGACACAGAAACT
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 CGTATGGAAGACATTAATAATTTGATTGCATCTCCATCTCCTACCCACATACATAAAGAACTACTAGTG
 CCACATCATCACCATATAGAGATACTCAAAGTCGGACAGCCTCACCAAACAGAGCAGGAAAAGGAGTCAT
 AGAACAGACAGAAAAATCTCATCCAAGAAGCCCTAACGTGTTATCTGTCGCTTTGAGTCAAAGAACTACA
 GTTCTGAGGAAGAACTAAATCCAAGATACTAGCTTTGCAGAATGCTCAGAGAAAGCGAAAAATGGAAC
 ATGATGGTTCACTTTTTCAAGCAGTAGGAATTATT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG218966 representing NM_181054
 Red=Cloning site Green=Tags(s)

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MEGAGGANDKKKISSERRKEKSRDAARRSRKSESEVFYELAHQLPLPHNVSSHLDKASVMRLTISYLRVR
KLLDAGDLIEDDMKAQMNC FYLKALDGFVMVLTDDGDMIYISDNVNKYMGLTQFELTGHSVDFDTHPCD
HEEMREMLTHRNLVKKGKEQNTQRSFFLRMKCTLTSRGRMTMNIK SATWKVLHCTGHIHVYDTSNQPQC
GYKPPMTCLVLI CEPIPHPSNIEIPLDSKTFLSRHSLDMKFSYCDERITELMGYEPEELLGRSIEYHH
ALDSDHLTKTHDMFTKGQVTTGQYRMLAKRGGYVWVETQATVIYNTKNSQPQCIVCVNYVSGIIQHDL
IFSLQQTECVLKPVESSDMKMTQLFTKVESEDTS SLDKFKKEDAL TLLAPAAGDTIISLDFGSNDTET
DDQQLEEVPLYNVMLPSPNEKLQINLAMSP LPTAETPKPLRSSADPALNQEVALKLEPNPESLELSFT
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MLAPYIPMDDDFQLRSFDQLSPLESSSASPESASPQSTVTVFQQTQIQEPTANATTTTATDELKTVTKD
RMEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKGVIEQTEKSHRSPNVL SVALSQRTT
VPEEELNPKILALQNAQRKRKMEHDGSLFQAVGII
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_181054

ORF Size: 2205 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.

RefSeq: [NM_181054.3](#)

RefSeq Size: 3812 bp

RefSeq ORF: 2208 bp

Locus ID: 3091

UniProt ID: [Q16665](#)

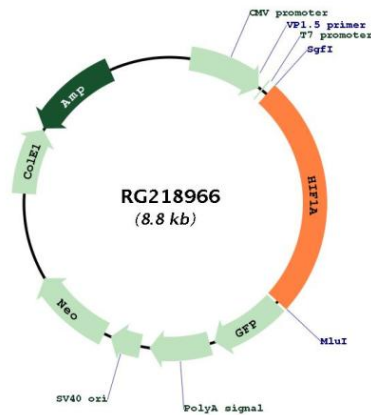
Cytogenetics: 14q23.2

Protein Families: Transcription Factors

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

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 RG218966