

Product datasheet for SC119189

HIF-1 alpha (HIF1A) (NM_001530) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HIF-1 alpha (HIF1A) (NM_001530) Human Untagged Clone
Tag:	Tag Free
Symbol:	HIF-1 alpha
Synonyms:	bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_001530 edited
 GAATTCGGCACGAGGCCCTCTTCGTCGCTTCGGCCAGTGTGTCTGGGCTGGGCCCTGACAAG
 CCACCTGAGGAGAGGCTCGGAGCCGGGCCCGGACCCCGCGGATTGCCGCCGCTTCTCTC
 TAGTCTCACGAGGGGTTTCCCGCTCGCACCCACCTCTGGAAGTGCCTTTCTCTCTCT
 TCTCCGCTGTGGAGGGAGCCAGCGCTTAGGCCGAGCGAGCCTGGGGGCCGCCCGCCT
 GAAGACATCGCGGGACCGATTACCATTGGAGGGCGCCGCGCGCAACGACAAGAAAA
 AGATAAGTTCTGAACGTCGAAAAGAAAAGTCTCGAGATGCAGCCAGATCTCGGCGAAGTA
 AAGAATCTGAAGTTTTTATGAGCTTGCTCATCAGTTGCCACTTCCACATAATGTGAGTT
 CGCATCTTGATAAGGCCCTCTGTGATGAGGCTTACCATCAGCTATTTGCGTGTGAGGAAAC
 TTCTGGATGCTGGTATTGGATATTGAAGATGACATGAAAGCACAGATGAATTGCTTTT
 ATTTGAAAGCCTTGGATGTTTTGTTATGTTTCTCACAGATGATGGTGACATGATTTACA
 TTTCTGATAATGTGAACAAATACATGGGATTAAGTCAAGTTTGAACAACTGGACACAGTG
 TTTTTGATTTACTCATCCATGTGACCATGAGGAAATGAGAGAAATGCTTACACACAGAA
 ATGGCCTTGTGAAAAAGGTAAGAAACAAAACACACAGCGAAGCTTTTTTCTCAGAATGA
 AGTGTACCCTAAGTAGCCGAGGAAGAACTATGAACATAAAGTCTGCAACATGGAAGGTAT
 TGCAGTGCACAGGCCACATTCACGTATATGATACCAACAGTAACCAACCTCAGTGTGGGT
 ATAAGAAACCACCTATGACCTGCTTGGTGTGATTTGTGAACCCATTCTCACCCATCAA
 ATATTGAAATTCCTTTAGATAGCAAGACTTTCTCAGTCGACACAGCCTGGATATGAAAT
 TTTCTTATTGTGATGAAAGAATTACCGAATTGATGGGATATGAGCCAGAAGAACTTTAG
 GCCGCTCAATTTATGAATATTATCATGCTTTGGACTCTGATCATCTGACCAAAACTCATC
 ATGATATGTTTACTAAAGGACAAGTCACCACAGGACAGTACAGGATGCTTGCCAAAAGAG
 GTGGATATGTCTGGTTGAAACTCAAGCAACTGTCATATATAACACCAAGAATTCTCAAC
 CACAGTGCATTGTATGTGTGAATTACGTTGTGAGTGGTATTATTTCAGCACGACTTGATTT
 TCTCCCTTCAACAAACAGAATGTGCCTTAAACCGTTGAATCTTCAGATATGAAAATGA
 CTCAGCTATTCACCAAAGTTGAATCAGAAGATAACAAGTAGCCTTTTGACAACTTAAGA
 AGGAACCTGATGCTTTAACTTTGCTGGCCCCAGCCGCTGGAGACACAATCATATCTTTAG
 ATTTTGGCAGCAACGACACAGAACTGATGACCAGCAACTTGAGGAAGTACCATTATATA



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ATGATGTAATGCTCCCCTCACCCAACGAAAAATTACAGAATATAAATTTGGCAATGTCTC
 CATTACCCACCGCTGAAACGCCAAAGCCACTTCGAAGTAGTGCTGACCCTGCACTCAATC
 AAGAAGTTGCATTAATAATTAGAACCAATCCAGAGTCACTGGAACCTTTCTTTTACCATGC
 CCCAGATTCCAGATCAGACACCTAGTCCTTCGGATGGAAGCACTAGACAAAAGTTCACCTG
 AGCCTAATAGTCCCAGTGAATATTGTTTTATGTGGATAGTGATATGGTCAATGAATTCA
 AGTTGGAATTGGTAGAAAACTTTTTGCTGAAGACACAGAAGCAAAGAACCCATTTTCTA
 CTCAGGACACAGATTTAGACTTGGAGATGTTAGCTCCCTATATCCCAATGGATGATGACT
 TCCAGTTACGTTCTTCGATCAGTTGTCACCATAGAAAAGCAGTTCGCAAGCCCTGAAA
 GCGCAAGTCTCAAAGCACAGTTACAGTATTCCAGCAGACTCAAATACAAGAACCTACTG
 CTAATGCCACCACTACCACTGCCACCACTGATGAATTAACAAACAGTGACAAAAGACCGTA
 TGGAAAGACATTAATAATTGATTGCATCTCCATCTCTACCCACATACATAAAGAACTA
 CTAGTGCCACATCATCCCATATAGAGATACTCAAAGTCGGACAGCCTCACCAAACAGAG
 CAGGAAAAGGAGTCATAGAACAGACAGAAAAATCTCATCAAGAAGCCCTAACGTGTTAT
 CTGTGCGTTTGTAGTCAAAGAACTACAGTTCCTGAGGAAGAACTAAATCCAAGATACTAG
 CTTTGCAGAATGCTCAGAGAAAGCGAAAAATGGAACATGATGGTTCACCTTTTCAAGCAG
 TAGGAATTGGAACATTATTACAGCAGCCAGACGATCATGCAGCTACTACATCACTTTCTT
 GGAACCGTGTAAAAGGATGCAAATCTAGTGAACAGAATGGAATGGAGCAAAGACAATTA
 TTTAATACCCCTGATTTAGCATGTAGACTGCTGGGGCAATCAATGGATGAAAGTGGAT
 TACCACAGCTGACCAGTTATGATTGTGAAGTAAATGCTCTATAACAAGGCAGCAGAAACC
 TACTGCAGGGTGAAGAATTACTCAGAGCTTTGGATCAAGTAACTGAGCTTTTTCTTAAT
 TTCATTCTTTTTTTGGACACTGGTGGCTCACTACCTAAAGCAGTCTATTTATATTTTCT
 ACATCTAATTTTGAAGCCTGGCTACAATACTGCACAACTTGGTTAGTTCAATTTTTGA
 TCCCTTTCTACTTAATTTACATTAATGCTCTTTTTTAGTATGTTCTTTAATGCTGGATC
 ACAGACAGCTCATTTTCTCAGTTTTTTGGTATTTAAACCATTGCATTGCAGTAGCATCAT
 TTXXXXXXXXXXXCTCGAC

**5' Read Nucleotide
 Sequence:**

>OriGene 5' read for NM_001530 unedited
 AGTATTTTGTAAACGACTCACTTATAGGGCGGCCGGAATCGGCACGAGGCCTCTTCGT
 CGCTTCGGCCAGTGTGTCGGCTGGGCCCTGACAAGCCACCTGAGGAGAGGCTCGGAGCC
 GGGCCCCGACCCCGCGATTGCCGCCGCTTCTCTAGTCTCAGGAGGGTTTTCCCGCC
 TCGCACCCACCTCTGGACTTGCTTTTCTTCTTCTCCTCGCGTGTGGAGGGAGCCAGC
 GCTTAGGCCGGAGCGAGCCTGGGGCGCCCGCGTGAAGACATCGCGGGACCGATTCA
 CCATGGAGGGCGCCGGCGCGAACGACAAGAAAAAGATAAGTTCTGAACGTCGAAAAG
 AAAAGTCTCGAGATGCAGCCAGATCTCGGCAAGTAAAGAATCTGAAGTTTTTTATGAGC
 TTGCTCATCAGTTGCCACTTCCACATAATGTGAGTTCCGATCTTGATAAGGCCTCTGTGA
 TGAGGCTTACCATCAGCTATTTGCGTGTGAGGAACTTCTGGATGCTGGTATTGGATA
 TTGAAGATGACATGAAAGCACAGATGAATTGCTTTTATTTGAAAGCCTTGGATGGTTTTG
 TTATGGTTCTCACAGATGATGGTGACATGATTTACATTTCTGATAATGTGAACAAATACA
 TGGGATTAAGTCAAGTTTGAAGTAACTGGACACAGTGGTGTGATTTTACTCATCCATGT
 GACCATGAGGAAATGAGAGAAATGCTTACACACAGAAATGGCCTTGTGAAAAGGGTANA
 GAACANAACACACAGCGAAGCTTNTTCTCAGAAATGAAGTGTACCCTAACTAGCCCGAGG
 AGAACTATGAACATAAAGTCTGCACCTTGGAAAGTATTGCACTGACAGGCCACATTCAGC
 TATATGATACCACAGTACCACCTCCATGTGGGGTATAAGAACCACTAGACCGGCTGGGGC
 GCTGGATT

3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_001530 unedited CGCGGCCCGCATTCTAANATCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCTGGTTTTAA AAAGTTTATTTGATGGAACAAAACAATACAGTTAGTGTTAGATCCAACCAAAGAGCAA AAGGAATGAAAAATTTGTACAATGTACATAGAAAAACAAGATATTTACTGTGACAACT ATATATTCCTAAAATAATGCTTCTAAATTTTTTCAATTATTGAAATCTACATGGGGAAAA GGATGTTAATAGCGACAAAAGTCATAAAATCAAACATTGTATTTTGAGCAAATTAACATA CTAGGCAATTTTGCTAAAAATGCATGATTTTTTTTTTTCTTGTTTACAGCCTGCTCAAAAT ATCTTTATACCAACAGGGTAGGCACAACATTTAGGTTTAAATATCAGTTACACAATATTAG CATAAACTTTCACAACTACATAGGGTATTGCCCTCTTTGACCTGGCAAAGTGACTATAC AAACATTATATGATTCTCTGAATTGACAATTTTCATCCAATAAATGCCACATACCTTGT ACATATATGCATATCTTCTATATTATGCAAAATGGCTTTACTCTTTAAAAATTAACCATG CATGATACAACAATCATTATCCTCCGATTAACACTGTGCTGCGGCAGCGTCAACACTCGT GCTGGCCCAAGAAAACTTTGAGCTAAAACTGTTCTATCAACCCATAATATGTCTCAT GAGCCACTGTTGGTCTTCTCTAATAAAAACTCTTGTGCAATGGGGCTACCACCCCTGT TGGCAAACGCCCTTATCTACGCACAAGGGGAAAAAAGGGGGAAAAATTGCCAACGGCCT TTTTTTTATCAAAGTATTGGCCTATTAATAAATATTTGGACTTTCTAAATATTTCGAA AAGGATAACCTCCCTTCCAAAAAATAAAAAGGGGCAT</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_001530
Insert Size:	4000 bp
OTI Disclaimer:	<p>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.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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_001530.2 , NP_001521.1
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

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]
Transcript Variant: This variant (1) represents the predominant transcript, and encodes isoform 1.