

# HIF1 Alpha Monoclonal Mouse Antibody (HIF1A-84)

## Product Description

HIF1 (hypoxia-inducible factor 1), a heterodimeric transcription factor complex central to cellular response to hypoxia, consists of two subunits (HIF-1 alpha and HIF-1 beta) which are basic helix-loop-helix proteins of the PAS (Per, ARNT, Sim) family. Expression of HIF-1 alpha protein is regulated by cellular oxygen level alterations as well as in oxygen-independent manner via different cytokines (through the PI3K-AKT-mTOR pathway), growth factors, oncogenic activation, or loss of tumor suppressor function etc. In normoxic cells, HIF-1 alpha is proline hydroxylated leading to a conformational change that promotes its binding to the VLH (von Hippel Lindau) protein E3 ligase complex; ubiquitination and followed by rapid proteasomal degradation. Hypoxia as well as chemical hydroxylase inhibitors (desferrioxamine, cobalt etc.) inhibit HIF-1 alpha degradation and lead to its accumulation in the cells, whereas, contrastingly, HIF-1 beta/ARNT (AhR nuclear translocator) remains stable under both conditions. Besides their critical role in hypoxic response, HIF1s regulates the transcription of genes responsible for angiogenesis, erythropoiesis/iron-metabolism, glucose metabolism, cell proliferation/survival, adipogenesis, carotid body formation, B lymphocyte development and immune reactions.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

**Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 0084, Anti-HIF1 Alpha (HIF1A-84)**

## Product attributes

Antibody number	#0084
Antibody reactivity (target)	HIF1 Alpha
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	HIF1A-84
Isotype	IgG2b, kappa
Molecular weight	92-110 kDa
Synonyms	ARNT-interacting protein; Basic-helix-loop-helix-PAS protein MOP1; Class E basic helix-loop-helix protein 78 (bHLHe78); Member of PAS superfamily 1 (MOP1); PAS domain-containing protein 8 (PASD8)
Human gene symbol	HIF1A
Entrez gene ID	3091
SwissProt	Q16665
Unigene	597216
Immunogen	Recombinant human HIF1 alpha protein
Verified antibody applications	IF (verified)
Antibody target cellular localization	Nucleus & cytoplasm
Species reactivity	Human
Antibody application notes	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody. Immunofluorescence: 0.5-1 ug/mL, Flow Cytometry 0.5-1 ug/million cells/0.1 mL, Optimal dilution for a specific application should be determined by user
Positive control	Cobalt chloride treated HeLa cells. Breast or bladder carcinomas.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C. Protect fluorescent conjugates from light. Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Antibody research areas	Hypoxia
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	<a href="#">CF®405S Features</a>
BNC88	CF®488A	490/515	488	GFP, FITC	<a href="#">CF®488A Features</a>
BNC68	CF®568	562/583	532, 561	RFP, TRITC	<a href="#">CF®568 Features</a>
BNC94	CF®594	593/614	561	Texas Red®	<a href="#">CF®594 Features</a>
BNC40	CF®640R	642/662	633-640	Cy®5	<a href="#">CF®640R Features</a>
BNC47	CF®647	650/665	633-640	Cy®5	<a href="#">CF®647 Features</a>
BNC74	CF®740	742/767	633-685	775/50	<a href="#">CF®740 Features</a>
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

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