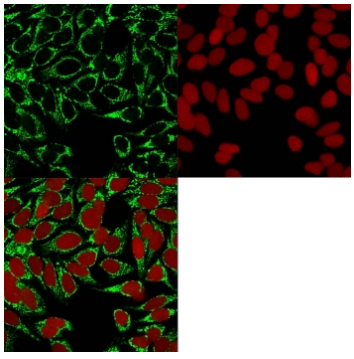
HIF1 alpha Antibody [clone HIF1A-84] (V2132)

Catalog No.	Formulation	Size
V2132-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2132-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2132SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	HIF1A-84
Purity	Protein G purified antibody
Buffer	1X PBS, pH 7.4
Gene ID	3091
Localization	Nuclear, possible cytoplasmic
Applications	Flow cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 0.5-1ug/ml
Limitations	This **HIF1 alpha antibody** is available for research use only.



Immunofluorescent staining of methanol-fixed human HeLa cells with HIF1 alpha antibody (green) and Reddot nuclear stain (red).

Description

HIF1 (hypoxia-inducible factor 1), a heterodimeric transcription factor complex central to cellular response to hypoxia, consists of two subunits (alpha and beta) which are basic helix-loop-helix proteins of the PAS (Per, ARNT, Sim) family. Expression of HIF-1 alpha 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, HIFs 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.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the HIF1 alpha antibody to be titered up or down for optimal performance.

Immunogen

Recombinant human HIF1 alpha was used as the immunogen for this antibody.

Storage

Store the HIF1 alpha antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Hypoxia inducible factor 1 alpha; 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), HIF1 alpha antibody

References (2)