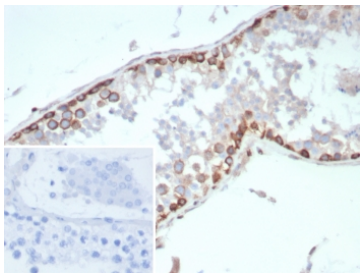
HIF1 alpha Antibody / HIF1A [clone HIF1A/8795] (V4351)

Catalog No.	Formulation	Size
V4351-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4351-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4351SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HIF1A/8795
Purity	Protein A/G affinity
UniProt	Q16665
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This HIF1 alpha antibody is available for research use only.



IHC staining of FFPE human testis tissue with HIF1 alpha antibody (clone HIF1A/8795). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

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.

Application Notes

Optimal dilution of the HIF1 alpha antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 239-530) from the human protein was used as the immunogen for the HIF1 alpha antibody.

Storage

Aliquot the HIF1 alpha antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.