

Catalog Number:	NB100-130SS
Background:	<p>Hypoxia contributes significantly to the pathophysiology of major categories of human disease, including myocardial and cerebral ischemia, cancer, pulmonary hypertension, congenital heart disease and chronic obstructive pulmonary disease.</p> <p>HIF-1 is a nuclear protein involved in mammalian oxygen homeostasis. This occurs as a posttranslational modification by prolyl hydroxylation. HIF-1 is a heterodimer composed of HIF-1 alpha and HIF-1 beta subunits. Both subunits are constantly translated. However, under normoxic conditions, human HIF-1 alpha is hydroxylated at Pro402 or Pro564 by a set of HIF prolyl hydroxylases, is polyubiquitinated, and eventually degraded in proteosomes. Under hypoxic conditions, the lack of hydroxylation prevents HIF degradation and increases transcriptional activity. Therefore, the concentration of HIF-1 alpha increases in the cell. In contrast, HIF-1 beta remains stable under either condition. HIF hydroxylases provide insight into hypoxic cell responses, which may be used to help isolate therapeutic targets.</p>
Alternate Names:	anti-Hypoxia-inducible factor 1 alpha antibody, anti-HIF1 alpha antibody, anti-ARNT interacting protein antibody, anti-Hif1a antibody, anti-ARNT interacting protein antibody, anti-HIF-1alpha antibody, anti-Hypoxia inducible factor 1 alpha antibody, anti-Hypoxia inducible factor 1 alpha subunit basic helix antibody
Research Areas:	10,348,0
Immunogen:	Fusion protein containing amino acids 432-528 of human HIF-1 alpha.
Clone:	H1alpha 67-7
Specificity:	This antibody is specific for HIF-1 alpha.(1)
Species Reactivity:	NB 100-130 recognizes human. Other species have not been tested.
Uses:	<p>By Western blot, this antibody recognizes bands at 120 kDa representing HIF-1 alpha in induced tissues and cells. Multiple bands may be seen at 120 kDa representing post-translational modification of HIF-1 alpha. NB 100-130 has also been used to immunoprecipitate human HIF-1 alpha.(1).</p> <p>Suggested working dilutions: *</p> <p>Western Blot - 1:500 -1:1,000</p> <p>Immunohistochemistry - **</p> <p>Immunoprecipitation - ND</p> <p>*The investigator should determine the optimal working dilution for a specific application. Nuclear extracts are recommended.</p> <p>** NB 100-123 or NB 100-131 is recommended for immunohistochemical analysis of HIF-1alpha.</p> <p>* Other applications have not been tested.</p>
Dilutions:	<p>Suggested working dilutions *</p> <p>Western Blot</p> <p>* Investigator should determine optimal working dilutions.</p>
Packaging:	0.025 ml protein G purified Mouse ascites.



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Concentration: 1.5 mg/ml

Storage: Store at 4C. Do not freeze.

Notes: Lot A is 1.4 mg/ml
Lot B is 1.5 mg/ml
* The mobility of HIF-1 alpha induced by desferrioxamine or cobalt chloride treatment differs from the mobility of the hypoxia-induced protein. The reason is not known.

Product Specific References: 1. Personal communications with Dr. Gregg Semenza, Johns Hopkins.

Gene Id: 3091

Reference Sequence: Q16665