

<b>Catalog Number:</b>	NB100-134SS
<b>Background:</b>	<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>
<b>Alternate Names:</b>	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
<b>Immunogen:</b>	Fusion protein containing amino acids 432-528 of human HIF-1 alpha.
<b>Specificity:</b>	This antibody is specific for HIF-1 alpha.
<b>Localization:</b>	Nucleus
<b>Species Reactivity:</b>	Human, mouse and rat. Mouse results mixed. Other species have not been tested.
<b>Uses:</b>	This antibody is useful for ChIP, immunohistochemistry, and Western Blot. IHC applications have been mixed on mouse. * Other applications have not been tested.
<b>Dilutions:</b>	Suggested working dilutions * chromatin immunoprecipitation - use 25 ul antibody for 15 million cells (nuclear extracts recommended), immunohistochemistry 1:100, Western Blot 1:500-1:1000, Immunohistochemistry-Paraffin * Investigator should determine optimal working dilutions.
<b>Positive Controls:</b>	PC12 nuclear extracts (hypoxically induced), Cobalt Chloride treated Cos-7 nuclear extracts
<b>Packaging:</b>	0.025 ml Whole Rabbit antisera.
<b>Preservative:</b>	0.05% Sodium azide
<b>Storage:</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Notes:</b>	You may use COS-7 treated and untreated nuclear extracts for your positive and

negative controls for hypoxic upregulation (NB 800-PC26).

\* 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.

**Novus Specific References:**

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**Gene Id:** 3091**Reference Sequence:** Q16665**Image(s)**