

Catalog Number:	NB100-449SS
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-HIF-1 alpha antibody; anti-ARNT interacting protein antibody; anti-Hif1a antibody; anti-ARNT interacting protein antibody; anti-HIF1Alpha antibody; anti-Hypoxia inducible factor 1 alpha antibody; anti-Hypoxia inducible factor 1 alpha subunit basic helix antibody
Research Areas:	10,348,0
Immunogen:	A synthetic peptide mapping to a region between residues 775 and the C-terminus (residue 826) of human hypoxia-inducible factor 1, alpha subunit using the numbering given in Swiss-Prot entry Q16665 (GeneID 3091).
Species Reactivity:	Human, monkey, fish and Mouse HIF-1 alpha in Western blot analysis. Preliminary results with Mouse tissue have been positive for immunohistochemistry*. Used at 1:100 on Mouse eye with high pH retrieval.
Uses:	This antibody is useful for: Western Blot, flow cytometry and immunohistochemistry. * Other applications have not been tested.
Dilutions:	Suggested working dilutions * flow cytometry / FACS analysis 0.125 mcg per 1 million cells, immunohistochemistry 1:100, Western Blot 1:500-1:2500, Immunohistochemistry-Paraffin 1:100 * Investigator should determine optimal working dilutions.
Packaging:	0.025 ml Immunogen affinity purified Rabbit antisera.
Concentration:	0.2 mg/ml
Buffer:	BSA in TBS
Preservative:	0.09% Sodium Azide
Storage:	Store at 4C. Do not freeze.

Notes:

Upon longer film exposure (4 minutes), NB 100-449 detected in vitro translated HIF-2 alpha. The cross-reactivity of NB 100-449 with HIF-2 alpha is estimated to be less than 1%. In samples that are devoid of HIF-1 alpha, one must be cautious not to misinterpret a HIF-2 alpha signal as HIF-1 alpha.

Blocking peptide is available or can be made for this item. Lead time is 3 days to 4 weeks. Price is \$ 150/0.25 ml (or 50 ug). Please enquire availability.

You may use COS-7 treated and untreated nuclear extracts for your positive and negative controls for hypoxic upregulation: NB800-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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General References:

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Gene Id: 3091

Image(s)