

# Product Datasheet

## HIF-1 alpha Antibody Pack

### NB100-905

Unit Size: 7 Vials

Store at 4C. Do not freeze.

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Updated 10/23/2024 v.20.1

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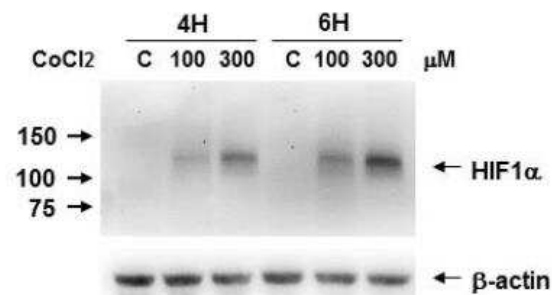


**NB100-905****HIF-1 alpha Antibody Pack**

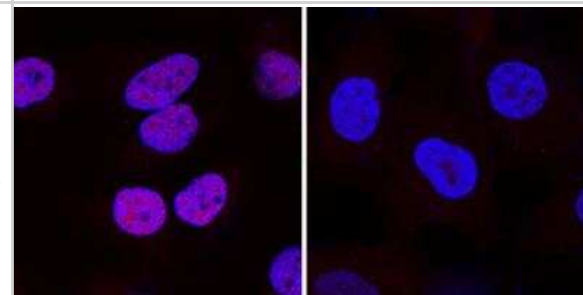
<b>Product Information</b>	
<b>Unit Size</b>	7 Vials
<b>Concentration</b>	Concentration of individual antibodies may be found on the vial label. If unlisted please contact technical services.
<b>Storage</b>	Store at 4C. Do not freeze.
<b>Product Description</b>	
<b>Description</b>	This pack contains 1 vial each of: NB100-654SS (0.025 mL), NB100-479SS (0.025 mL), NB100-449SS (0.025 mL), NB100-105 (0.05 mL) and NB100-131 (0.05 mL).
<b>Gene ID</b>	3091
<b>Gene Symbol</b>	HIF1A
<b>Species</b>	Human, Mouse, Rat, Canine
<b>Reactivity Notes</b>	See individual datasheets of components for their validated species
<b>Specificity/Sensitivity</b>	These antibodies are specific for HIF-1alpha.
<b>Immunogen</b>	For NB 100-654: Human HIF-1 alpha amino acids 432-528. For NB 100-105: Human HIF-1 alpha amino acids 432-528. For NB 100-131: Human HIF-1 alpha amino acids 329-530. For NB 100-449: Human HIF-1 alpha amino acids 775-826. For NB 100-479: Antibody was developed against a fusion protein including amino acids 530 - 825 of the mouse HIF-1 alpha protein [Uniprot# Q61221].
<b>Kit Components</b>	NB100-105: HIF-1 alpha Antibody (H1alpha67), NB100-654: HIF-1 alpha Antibody - BSA Free, HAF007: Goat anti-Mouse IgG Secondary Antibody [HRP], HAF008: Goat anti-Rabbit IgG Secondary Antibody [HRP], NB100-479: HIF-1 alpha Antibody - BSA Free, NB100-449: HIF-1 alpha Antibody, NB100-131: HIF-1 alpha Antibody (ESEE122)
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Simple Western, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
<b>Recommended Dilutions</b>	Western Blot, Simple Western, Flow Cytometry, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen
<b>Application Notes</b>	See individual datasheets of components for their validated applications. Western Blot: A starting dilution of 1:1,000 is recommended with titration up or down depending upon the signal and background. Immunohistochemistry: Both positive and negative feedback have been provided on all antibodies included in this pack. A starting dilution of 1:250 is recommended with titration up or down depending upon the signal and background.

## Images

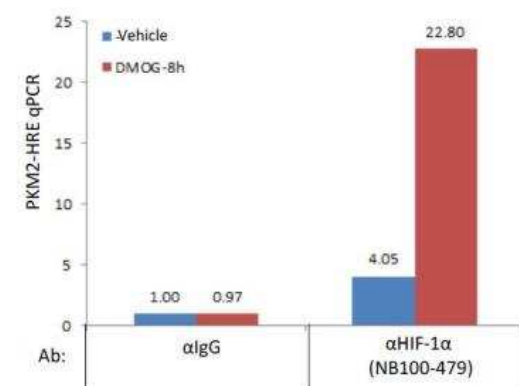
Western Blot: HIF-1 alpha Antibody Pack [NB100-905] - HIF-1 alpha induction by CoCl<sub>2</sub> on Caki-1 cell lysate. Image from verified customer review. HIF-1 alpha Antibody (H1alpha67) [NB100-105]



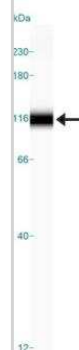
Knockout Validated: HIF-1 alpha Antibody Pack [NB100-905] - HIF-1 alpha was detected in immersion fixed DFO treated HeLa cells (left) but was not detected in HIF-1 knockout HeLa cells (right) using Mouse Anti-human HIF-1 alpha monoclonal antibody (Catalog #NB100-105) at 25 ug/mL for 3 hours at room temperature. Cells were stained using a NorthernLights (TM) 557-conjugated Donkey Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to nuclei. HIF-1 alpha Antibody (H1alpha67) [NB100-105]



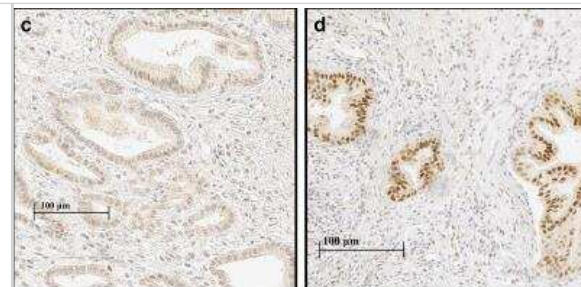
Chromatin Immunoprecipitation: HIF-1 alpha Antibody Pack [NB100-905] - ChIP-qPCR assay of HIF-1 binding to hypoxia response element (HRE) of the PKM2 gene in human MDA-MB-231 breast cancer cells treated with vehicle or DMOG (HIF inducer) for 8 hours. Negative control: immunoprecipitation was performed with IgG. Image courtesy of Gregg Semenza, Johns Hopkins University School of Medicine. HIF-1 alpha Antibody [NB100-479]



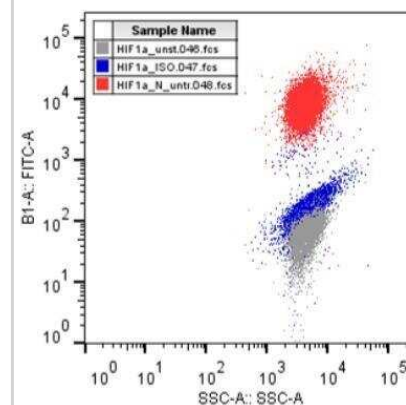
Simple Western: HIF-1 alpha Antibody Pack [NB100-905] - Simple Western lane view shows a specific band for HIF-1 alpha in 0.5 mg/ml of hypoxic HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. HIF-1 alpha Antibody [NB100-449]



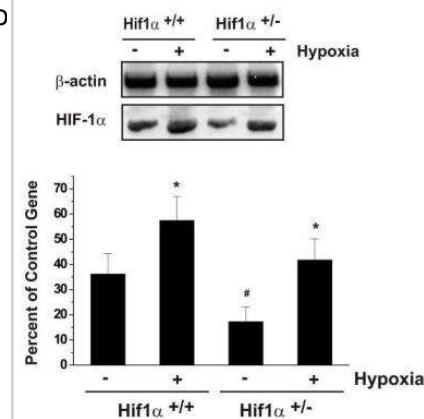
Immunohistochemistry: HIF-1 alpha Antibody Pack [NB100-905] - HIF-1alpha expression in PDAC and adjacent normal pancreatic tissue. PDAC with weak (intensity 1) nuclear and cytoplasmic HIF-1alpha staining (left). PDAC with strong (intensity 3) nuclear and moderate (intensity 2) cytoplasmic HIF-1alpha staining (right). Image collected and cropped by CiteAb from the following publication (<http://wjso.biomedcentral.com/articles/10.1186/s12957-018-1432-4>), licensed under a CC-BY license. HIF-1 alpha Antibody (H1alpha67) [NB100-105]



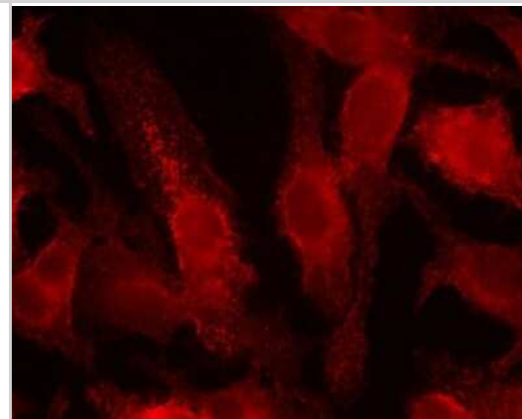
Flow Cytometry: HIF-1 alpha Antibody Pack [NB100-905] - Analysis using the Alexa Fluor (R) 488 conjugate of NB100-105. Staining of HIF-1 alpha in multiple myeloma cells: H929 cells ( $0.5 \times 10^6$ ) were stained with Alexa Fluor 488 (R) conjugated HIF-1 alpha antibody (NB100-105AF488). Image courtesy of Dr. Barbara Muz at Washington University in St. Louis School of Medicine. HIF-1 alpha Antibody (H1alpha67) [NB100-105]



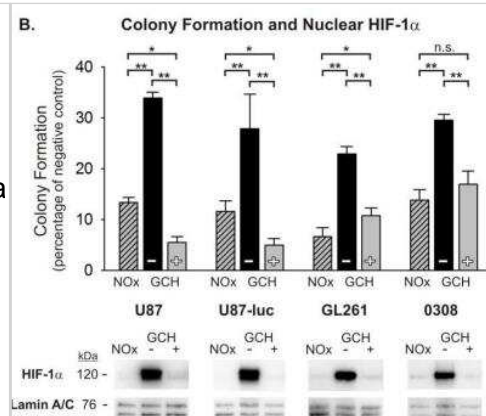
Western Blot: HIF-1 alpha Antibody Pack [NB100-905] - Effects of in vitro hypoxia on the expression of mouse HIF-1 alpha in HIF-1 alpha<sup>+/-</sup> and HIF-1 alpha<sup>+/+</sup> astrocytes. Confluent astrocyte monolayers of both cell types were exposed to a 6 h in vitro hypoxia. HIF-1 alpha mRNA expression was determined by RT-PCR as described in Materials and Methods. Each bar represents the mean  $\pm$  SD of relative density/volumes of the bands on film negatives from at least three experiments. Asterisks and number sign indicate significant difference ( $p < 0.01$ ; one-way ANOVA, followed by multiple comparisons among means). Image collected and cropped by CiteAb from the following publication (<http://jneuroinflammation.biomedcentral.com/articles/10.1186/1742-2094-4-12>), licensed under a CC-BY license. HIF-1 alpha Antibody [NB100-654]



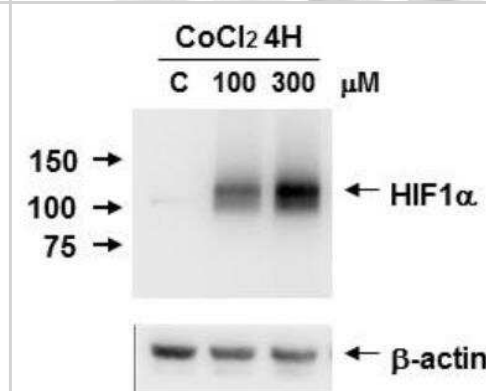
Immunocytochemistry/Immunofluorescence: HIF-1 alpha Antibody Pack [NB100-905] - Detection of HIF-1 alpha (red dye 568) in a cultured raw mouse macrophage cell line, using NB100-131. 100X magnification. Photos courtesy of Susan Alexander and Hattie Gresham, PhD. HIF-1 alpha Antibody (ESEE122) [NB100-131]



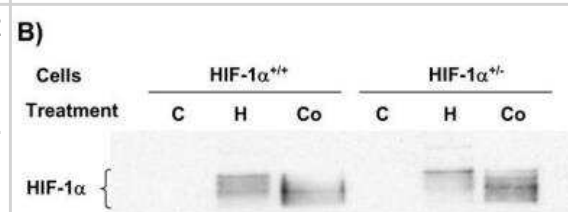
Western Blot: HIF-1 alpha Antibody Pack [NB100-905] - Normoxic pretreatment sensitizes glioma cells to radiation after graded chronic hypoxic (GCH) exposure. The results of anchorage-independent colony forming assays are shown for U87, U87-luc, GL261 glioma cells and 0308 GSCs after 5 Gy radiation exposure under varying O<sub>2</sub> conditions. For easier comparisons among cell types, raw values are expressed as a % of the cell type's negative (non-irradiated) control and the means & SEMs are plotted. Also shown are Western blots of nuclear HIF-1alpha at the time of irradiation. Corresponding Western blots of lamin A/C are shown as a loading control. Image collected and cropped by CiteAb from the following publication ([//dx.plos.org/10.1371/journal.pone.0111199](https://doi.org/10.1371/journal.pone.0111199)) licensed under a CC-BY license. HIF-1 alpha Antibody [NB100-479].



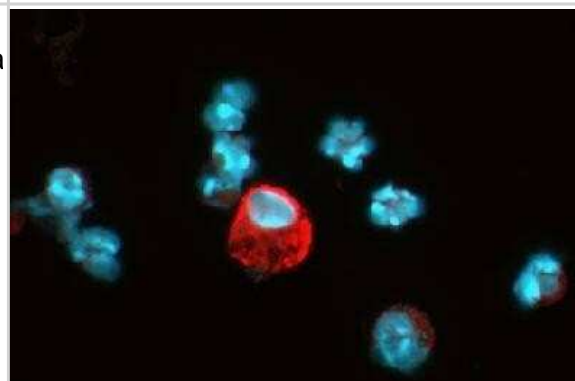
Western Blot: HIF-1 alpha Antibody Pack [NB100-905] - HIF-1 alpha induction on Caki-1 cell lysate using CoCl<sub>2</sub>. Image from verified customer review. HIF-1 alpha Antibody [NB100-449]



Western Blot: HIF-1 alpha Antibody Pack [NB100-905] - Effects of CoCl<sub>2</sub> treatment on HIF-1 alpha expression in mouse astrocytes. Western blots using nuclear proteins show that both hypoxia (H) and CoCl<sub>2</sub> (Co) up-regulated HIF-1 alpha protein in HIF-1 alpha<sup>+/+</sup> and HIF-1 alpha<sup>+/-</sup> cells. There was no HIF-1 alpha protein detected in control cells. Image collected and cropped by CiteAb from the following publication ([//jneuroinflammation.biomedcentral.com/articles/10.1186/1742-2094-4-12](https://doi.org/10.1186/1742-2094-4-12)), licensed under a CC-BY license. HIF-1 alpha Antibody [NB100-654]

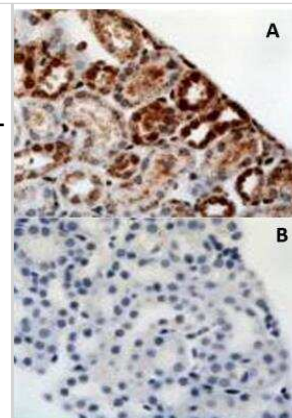


Immunocytochemistry/Immunofluorescence: HIF-1 alpha Antibody Pack [NB100-905] - Detection of HIF-1 alpha (red dye) in a cell cytospin from a lavage of a murine skin pouch infected with Staph Aureus, using NB100-131. 100X magnification. Blue dye is DAPI nuclei

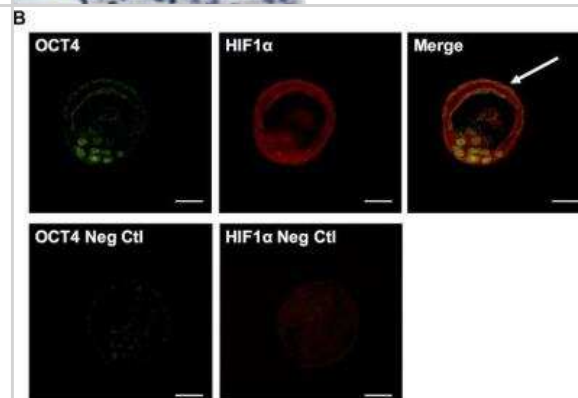




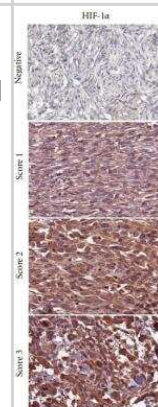
Immunohistochemistry: HIF-1 alpha Antibody Pack [NB100-905] - Staining in normal mouse kidney showing (A) staining with antibody and (B) blocking peptide used at 10-fold excess concentration. Images provided by Dr Yves Heremans. Please see the product review of NBC1-18422 for additional details. HIF-1 alpha Antibody [NB100-479]



Immunohistochemistry: HIF-1 alpha Antibody Pack [NB100-905] - Hif1alpha expression in preimplantation embryos. Co-staining of OCT4 and Hif1alpha in inner cell mass of blastocyst (top) and negative control images without primary antibodies (bottom). Scale bar: 30um. Image collected and cropped by CiteAb from the following publication ([//dx.plos.org/10.1371/journal.pone.0154309](https://dx.plos.org/10.1371/journal.pone.0154309)) licensed under a CC-BY license. HIF-1 alpha Antibody [NB100-479]



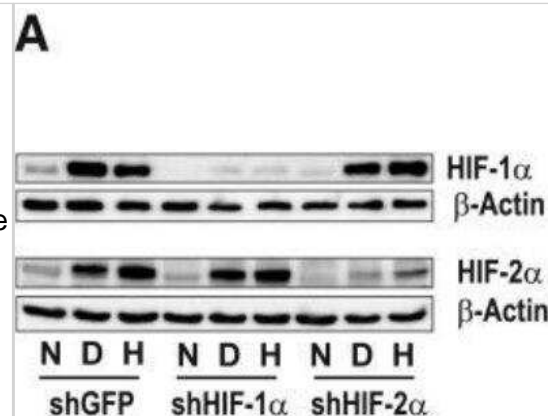
Immunohistochemistry: HIF-1 alpha Antibody Pack [NB100-905] - Immunohistochemical analysis in non-GIST STS representing negative, and score 1-3 of Carbonic Anhydrase IX/CA9, GLUT-1, HIF-1 alpha, and HIF-2 alpha/EPAS1. non-GIST STS: non-gastrointestinal stromal tumor soft-tissue sarcomas, Carbonic Anhydrase IX/CA9: carbonic anhydrase IX, GLUT-1: glucose transporter-1, and HIF-1/2alpha: hypoxia induced factor 1/2alpha. Image collected and cropped by CiteAb from the following publication ([//www.hindawi.com/journals/sarcoma/2012/541650/](http://www.hindawi.com/journals/sarcoma/2012/541650/)), licensed under a CC-BY license. HIF-1 alpha Antibody (ESEE122) [NB100-131]



Immunohistochemistry: HIF-1 alpha Antibody Pack [NB100-905] - Analysis of HIF-1 alpha in paraffin-embedded mouse kidney tissue section using anti-HIF-1 alpha antibody. Image from verified customer review. HIF-1 alpha Antibody (ESEE122) [NB100-131]



Knockdown Validated: HIF-1 alpha Antibody Pack [NB100-905] - Morphological alterations induced by DMOG are HIF-1alpha dependent. gIEND.2 cells were stably transfected with shGFP, shHIF-1alpha or shHIF-2alpha. The clones were cultured under normoxic (N) or hypoxic (H, 1% O<sub>2</sub>) conditions, or treated with DMOG for 6 h. 30 ug protein of cellular protein were loaded for the detection of HIF-1alpha, and nuclear extracts (20 ug protein) were used for the detection of HIF-2alpha. Image collected and cropped by CiteAb from the following publication ([//biosignaling.biomedcentral.com/articles/10.1186/1478-811X-11-80](http://biosignaling.biomedcentral.com/articles/10.1186/1478-811X-11-80)) licensed under a CC-BY license. HIF-1 alpha Antibody [NB100-449]



## Publications

Jeon, H et al. Quercetin activates an angiogenic pathway, hypoxia inducible factor (HIF)-1-vascular endothelial growth factor, by inhibiting HIF-prolyl hydroxylase: a structural analysis of quercetin for inhibiting HIF-prolyl hydroxylase. *Mol Pharmacol* 71(6):1676-84. 2007-06-01 [PMID: 17377063]

Gu, M et al. Silibinin inhibits inflammatory and angiogenic attributes in photocarcinogenesis in SKH-1 hairless mice. *Cancer Res* 67(7):3483-91. 2007-04-01 [PMID: 17409458] (WB, Mouse)

Winner M, Koong AC, Rendon BE et al. Amplification of tumor hypoxic responses by macrophage migration inhibitory factor-dependent hypoxia-inducible factor stabilization. *Cancer Res* 2007-01-01 [PMID: 17210698] (IP, WB, Human)

Su, H et al. Adeno-associated viral vector-mediated hypoxia response element-regulated gene expression in mouse ischemic heart model. *Proc Natl Acad Sci U S A* 99(14):9480-5. 2002-07-09 [PMID: 12084814] (IF/IHC, Mouse)



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General: novus@novusbio.com

### **Products Related to NB100-905**

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H00003091-P01-10ug	Recombinant Human HIF-1 alpha GST (N-Term) Protein
NB100-105	HIF-1 alpha Antibody (H1alpha67)
NB100-479	HIF-1 alpha Antibody - BSA Free
NB100-122	HIF-2 alpha/EPAS1 Antibody - BSA Free

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Antibody Packs are guaranteed for 1 year from date of receipt.

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