

## HIF1 alpha (Hypoxia-Inducible Factor 1-alpha) Antibody

Mouse Monoclonal Antibody [Clone Ha111a]

Catalog No	Format	Size
3091-MSM4-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
3091-MSM4-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
3091-MSM4-P1ABX	Purified Ab WITHOUT BSA and Azide at 1.0mg/ml	100 ug

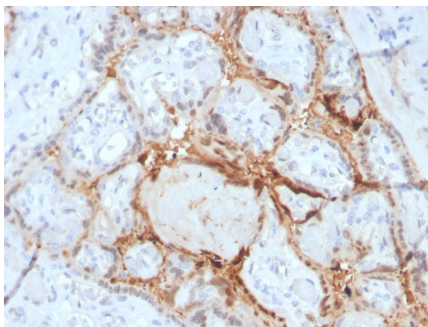
Applications	Tested Dillution	Note
Immunohistochemistry (IHC)	1-2ug/ml	30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes
Western Blot (WB)	2-4ug/ml	

### Product Details

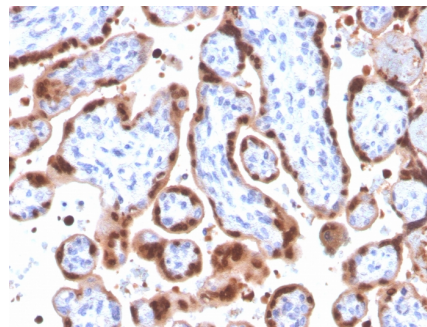
<b>Clone</b>	Ha111a
<b>Gene Name</b>	HIF1A
<b>Immunogen</b>	Synthetic peptide corresponding to human HIF-1 alpha aa 239-530.
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype / Light Chain</b>	IgG2a / Kappa
<b>Mol. Weight of Antigen</b>	92-110kDa
<b>Cellular Localization</b>	Cytoplasm, Nucleus, Nucleus speckle
<b>Species Reactivity</b>	Chicken, Human, Mouse
<b>Positive Control</b>	Cobalt chloride treated HeLa cells. Breast or bladder carcinomas.

\*Optimal dilution for a specific application should be determined.

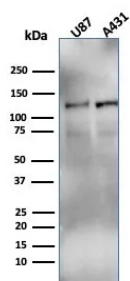
### Product Images for HIF1 alpha (Hypoxia-Inducible Factor 1-alpha) Antibody



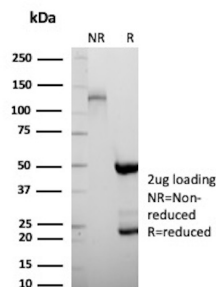
Formalin-fixed, paraffin-embedded human placenta stained with HIF1 alpha Mouse Monoclonal Antibody (Ha111a).



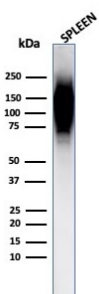
Formalin-fixed, paraffin-embedded human placenta stained with HIF1 alpha Mouse Monoclonal Antibody (Ha111a).



Western Blot Analysis of U87 and A431 cell lysate using HIF1 alpha Mouse Monoclonal Antibody (Ha111a).



SDS-PAGE Analysis of Purified Hypoxia-inducible factor 1-alpha Mouse Monoclonal Antibody (Ha111a). Confirmation of Purity and Integrity of Antibody.



Western Blot Analysis of human spleen tissue lysate using HIF1 alpha Mouse Monoclonal Antibody (Ha111a).

### Specificity & Comments

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.

### Limitations and Warranty

This antibody is available for research use only and is not approved for use in diagnosis. There are no warranties, expressed or implied, which extend beyond this description. Company is not liable for any personal injury or economic loss resulting from this product.

### Supplied As

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

### Storage and Stability

Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.

### Research Areas

Angiogenesis, Cardiovascular, Cytokine Signaling, Immunology, Nuclear Marker, Signal Transduction