Catalog # 3091-MSM3
Product Datasheet

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

Mouse Monoclonal Antibody [Clone HIF1A/3248]

Catalog No	Format	Size
3091-MSM3-P0	Purified Ab with BSA and Azide at 200ug/ml	20 ug
3091-MSM3-P1	Purified Ab with BSA and Azide at 200ug/ml	100 ug
3091-MSM3-P1ABX	Purified Ab WITHOUT BSA and Azide at 1.0mg/ml	100 ug

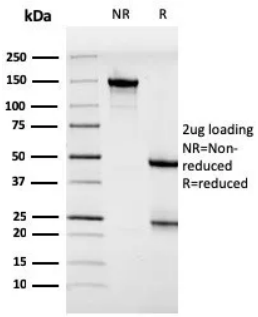
Applications	Tested Dillution	Note
Immunohistochemistry (IHC)	1-2ug/ml	30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes

Product Details

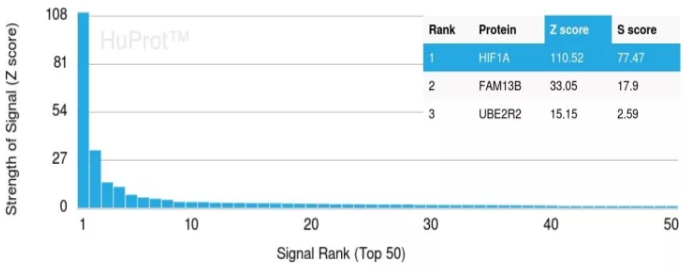
Clone	HIF1A/3248
Gene Name	HIF1A
Immunogen	Recombinant fragment (aa 239-530) of human HIF-1 alpha protein.
Host	Mouse
Clonality	Monoclonal
Isotype / Light Chain	IgG1 / Kappa
Mol. Weight of Antigen	92-110kDa
Cellular Localization	Cytoplasm. Nucleus.
Species Reactivity	Human
Positive Control	Human breast or bladder carcinomas.

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

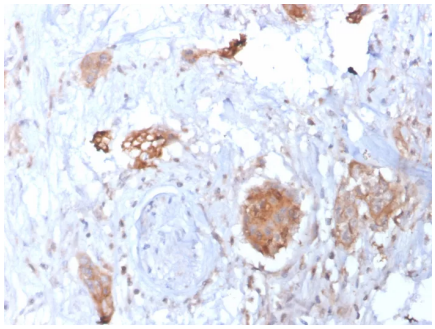
Product Images for HIF1 alpha (Hypoxia-Inducible Factor 1-alpha) Antibody



SDS-PAGE Analysis of Purified HIF1 alpha Mouse Monoclonal Antibody (HIF1A/3248). Confirmation of Purity and Integrity of Antibody.



Analysis of Protein Array containing more than 19,000 full-length human proteinsusing HIF1a Mouse Monoclonal Antibody (HIF1A/3248). Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



Formalin-fixed, paraffin-embedded human breast carcinoma stained with HIF1 alpha Mouse Monoclonal Antibody (HIF1A/3248). Inset: PBS instead of primary antibody; secondary only negative control.

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.

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

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.