

Product datasheet for TA309691

HIF-1 alpha (HIF1A) Mouse Monoclonal Antibody [Clone ID: H1alpha67]

Product data:

Product Type:	Primary Antibodies
Clone Name:	H1alpha67
Applications:	IHC, IP, WB
Recommend Dilution:	WB, IF, IHC
Reactivity:	Bovine, Ferret, Human, Mouse, Porcine, Primate, Rat, Sheep
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Fusion protein containing amino acids 432-528 of human HIF-1 alpha
Formulation:	Tris-glycine, 150mM NaCl pH 7.5 and 0.05% Sodium Azide
Purification:	Protein A purified
Gene Name:	hypoxia inducible factor 1 alpha subunit
Database Link:	NP_001521 Entrez Gene 15251 MouseEntrez Gene 29560 RatEntrez Gene 3091 Human
Background:	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. 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.
Synonyms:	bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8
Protein Families:	Transcription Factors
Protein Pathways:	mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma



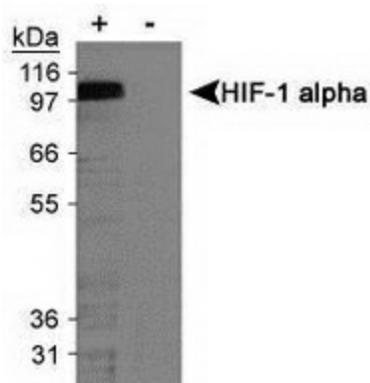
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Product images:

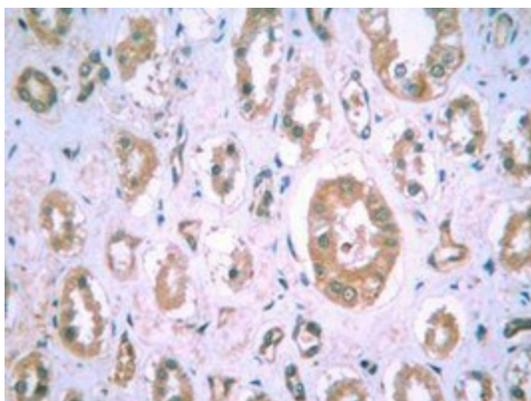
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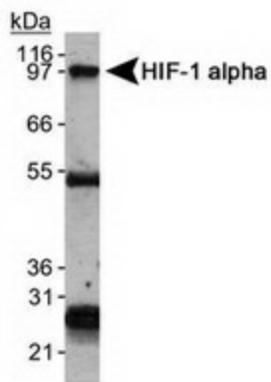
Western Blot: HIF-1 alpha Antibody (H1alpha67) - Upon quantification, 100ug of MEF cells (+/+, -/-) protein was fractionated on 7% polyacrylamide gel. -Gel was transferred overnight onto nitrocellulose membrane. The membrane was probed with HIF-1 alpha monoclonal antibody at 1:500. The secondary antibody was conjugated with HRP and was used at 1:2500.



Western Blot: HIF-1 alpha Antibody (H1alpha67) - Detection of HIF-1 alpha in cobalt chloride treated and untreated COS-7 nuclear extracts.



Immunohistochemistry: HIF-1 alpha Antibody (H1alpha67) - Staining of HIF-1 alpha in human kidney.



Immunoprecipitation: HIF-1 alpha Antibody (H1alpha67) - Heavy and light chains are also detected.