

Product datasheet for **TA309691**

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

Product data:

Product Type:	Primary Antibodies
Clone Name:	H1alpha67
Applications:	ChIP, ELISA, FC, ICC/IF, IHC, Immunoblotting, IP, WB
Recommended Dilution:	Chromatin Immunoprecipitation: 1:10 - 1:500, Western Blot: 1:500 - 1:1000, Flow Cytometry: 1:10 - 1:1000, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry: 1:100 - 1:300, Immunohistochemistry-Paraffin: 1:100 - 1:300, Immunoprecipitation: 1:10, Gel Super Shift Assays: 1:1 - 1:100, Knockout Validated, Chromatin Immunoprecipitation (ChIP): 1:10-1:500, ELISA: 1:100 - 1:2000, Immunoblotting, Knockdown Validated
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
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	hypoxia inducible factor 1 alpha subunit
Database Link:	NP_001521 Entrez Gene 15251 Mouse Entrez Gene 29560 Rat Entrez Gene 3091 Human Q16665



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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:

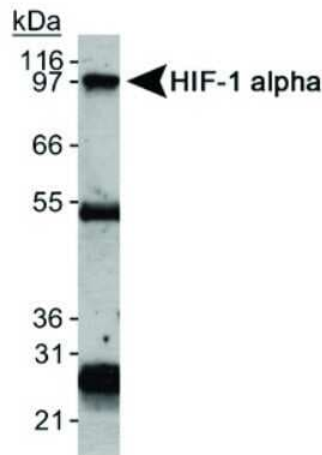
bHLHe78; HIF-1-alpha; HIF-1A; HIF-1alpha; HIF1; HIF1-ALPHA; MOP1; PASD8

Protein Families:

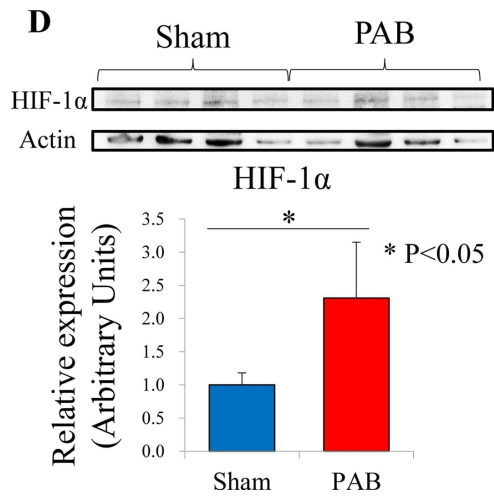
Transcription Factors

Protein Pathways:

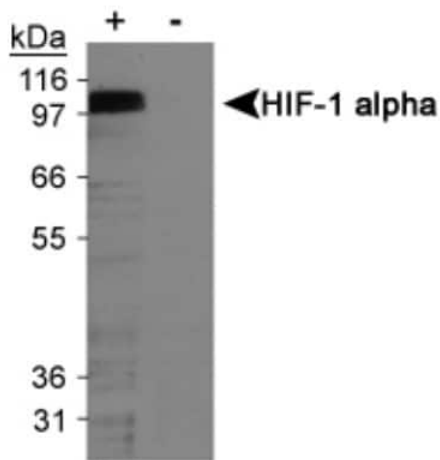
mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma

Product images:

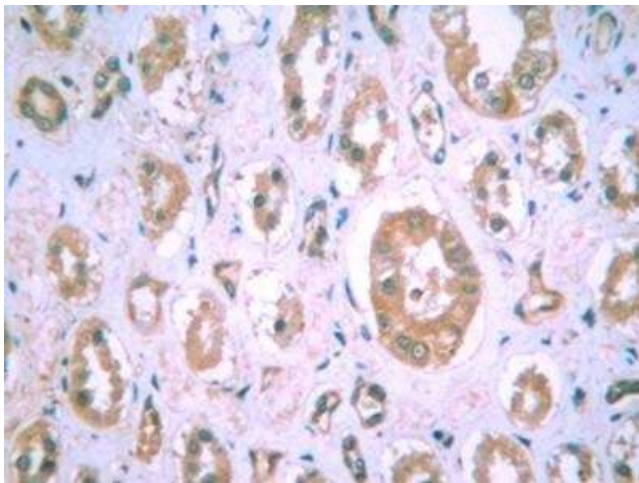
Immunoprecipitation: HIF-1 alpha Antibody (H1alpha67) TA309691 - Immunoprecipitation of HIF-1alpha using TA309691 in COS7 CoCl₂ treated lysate. Heavy and light chains are also detected. Image using the HRP form of this antibody.



Immunohistological and western blot analyses of HIF-1α. (A) PAB liver stained by HIF-1α (original magnification, ×20). (B) Sham-operated control liver stained by HIF-1α (original magnification, ×20). (C) Enlarged view of the boxed area in the Image (A) (original magnification, ×100). (D) Western blot analysis of HIF-1α (mean ± SEM), * P<0.05. HIF-1α: hypoxia-inducible factor-1α; PAB: pulmonary artery banding.



Western Blot: HIF-1 alpha Antibody (H1alpha67) TA309691 - Analysis using the HRP conjugate of TA309691. Detection of HIF-1 alpha in cobalt chloride treated/untreated COS-7 nuclear extracts using TA309691.



Immunohistochemistry: HIF-1 alpha Antibody (H1alpha67) TA309691 - Staining of biotin conjugated HIF-1 alpha (TA309691B) in human kidney.