

Product datasheet for **TA336704**

HIF-1 alpha (HIF1A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Simple Western, WB
Recommended Dilution:	Western Blot: 1:3500, Simple Western: 1:250
Reactivity:	Human, Mouse, Porcine
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Genomic sequence made to an internal portion of human HIF-1 alpha (within residues 400-550). [Swiss-Prot# Q16665]
Formulation:	PBS, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity 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_851397 Entrez Gene 15251 Mouse Entrez Gene 3091 Human Q16665



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Background:

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.

Synonyms:

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

Note:

This HIF-1 alpha antibody is useful for Western blot, where bands are seen ~97 kDa and 120 kDa.

Protein Families:

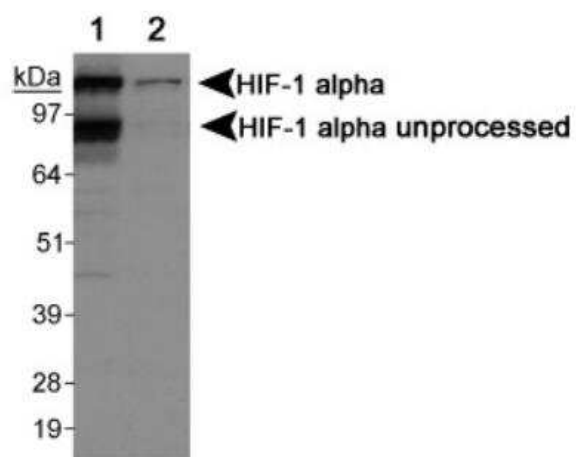
Transcription Factors

Protein Pathways:

mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma

Product images:

Simple Western: HIF-1 alpha Antibody TA336704 - 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.



Western Blot: HIF-1 alpha Antibody TA336704 - Detection of HIF-1 alpha using TA336704. Lane 1: COS7 CoCl₂ treated cells Lane 2: COS7 untreated cells.