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Product datasheet for TA336484

HIF-1 alpha (HIF1A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, Simple Western, WB
Recommended Dilution:	Knockdown Validated, Immunocytochemistry/ Immunofluorescence: 1:10 - 1:500, Immunohistochemistry-Paraffin: 1:100 - 1:300, Immunohistochemistry-Frozen: 1:100 - 1:300, Western Blot: 1:1000, Simple Western: 1:100, Immunohistochemistry: 1:100 - 1:300, Gel Super Shift Assays
Reactivity:	Human, Mouse, Rat, Porcine
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Fusion protein containing amino acids 432-528 of human HIF-1 alpha [UniProt# Q16665]
Formulation:	PBS, 0.01% Sodium Azide. Aliquot and store at -20C or -80C. 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 MouseEntrez Gene 29560 RatEntrez Gene 3091 Human Q16665

View online »

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

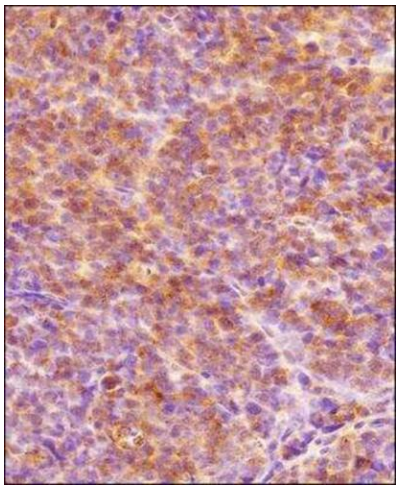
Note: This HIF-1 alpha antibody is useful for Western blot. Nuclear extracts are recommended. Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Frozen and Immunohistochemistry-Paraffin were reported in scientific literature.

Protein Families: Transcription Factors

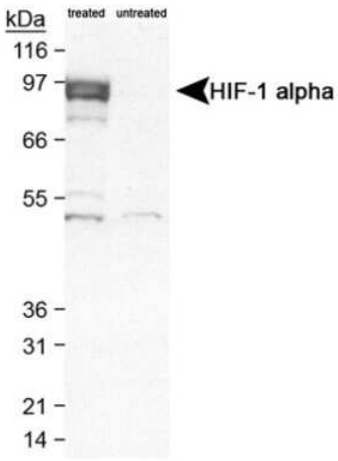
Protein Pathways: mTOR signaling pathway, Pathways in cancer, Renal cell carcinoma

Product images:

Simple Western: HIF-1 alpha Antibody TA336484 - 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.



Immunohistochemistry-Paraffin: HIF-1 alpha Antibody TA336484 - IHC analysis of a formalin-fixed paraffin-embedded tissue section of human endometrium carcinoma AN3CA cell line based xenograft using rabbit polyclonal HIF-1 alpha antibody TA336484 at 1:300 dilution. The signal was developed using HRP-labelled secondary antibody and DAB reagent, and the section was further counterstained using hematoxylin. The tested section depicted mainly a diffused cytoplasmic staining but there were some cells which showed nuclear signal also (representing hypoxic cells).



Western Blot: HIF-1 alpha Antibody TA336484 - Detection of HIF-1 alpha in cobalt chloride treated/untreated COS-7 nuclear extracts using TA336484.