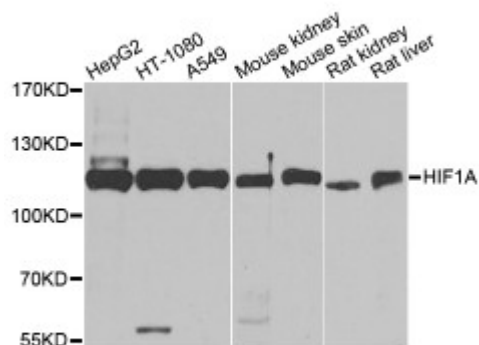


Anti-HIF1A Antibody



Description

This gene encodes the alpha subunit of transcription factor hypoxia-inducible factor-1 (HIF-1), which is a heterodimer composed of an alpha and a beta subunit. HIF-1 functions as a master regulator of cellular and systemic homeostatic response to hypoxia by activating transcription of many genes, including those involved in energy metabolism, angiogenesis, apoptosis, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia. HIF-1 thus plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene.

Model

STJ113863

Host

Rabbit

Reactivity

Human, Mouse, Rat

Applications

WB

Immunogen

Recombinant fusion protein containing a sequence corresponding to amino acids 70-260 of human HIF1A (NP_851397.1).

Gene ID

[3091](#)

Gene Symbol

[HIF1A](#)

Dilution range

WB 1:500 - 1:2000

Tissue Specificity

Expressed in most tissues with highest levels in kidney and heart, Overexpressed in the majority of common human cancers and their metastases, due to the presence of intratumoral hypoxia and as a result of mutations in genes encoding oncoproteins and tumor suppressors, A higher level expression seen in pituitary tumors as compared to the pituitary gland

Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Hypoxia-inducible factor 1-alpha HIF-1-alpha HIF1-alpha ARNT-interacting protein Basic-helix-loop-helix-PAS protein MOP1 Class E basic helix-loop-helix protein 78 bHLHe78 Member of PAS protein 1 PAS domain-c
Molecular Weight	92.67 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:49100 MIM:603348 Reactome:R-HSA-1234158
Alternative Names	Hypoxia-inducible factor 1-alpha HIF-1-alpha HIF1-alpha ARNT-interacting protein Basic-helix-loop-helix-PAS protein MOP1 Class E basic helix-loop-helix protein 78 bHLHe78 Member of PAS protein 1 PAS domain-c
Function	Functions as a master transcriptional regulator of the adaptive response to hypoxia, Under hypoxic conditions, activates the transcription of over 40 genes, including erythropoietin, glucose transporters, glycolytic enzymes, vascular endothelial growth factor, HILPDA, and other genes whose protein products increase oxygen delivery or facilitate metabolic adaptation to hypoxia, Plays an essential role in embryonic vascularization, tumor angiogenesis and pathophysiology of ischemic disease, Binds to core DNA sequence 5'-[AG]CGTG-3' within the hypoxia response element (HRE) of target gene promoters, Activation requires recruitment of transcriptional coactivators such as CREBBP and EP300, Activity is enhanced by interaction with both, NCOA1 or NCOA2, Interaction with redox regulatory protein APEX seems to activate CTAD and potentiates activation by NCOA1 and CREBBP, Involved in the axonal distribution and transport of mitochondria in neurons during hypoxia,
Cellular Localization	Cytoplasm,
Post-translational Modifications	S-nitrosylation of Cys-800 may be responsible for increased recruitment of p300 coactivator necessary for transcriptional activity of HIF-1 complex,