For Research Use Only

HIF-1 alpha Polyclonal antibody

Catalog Number:20960-1-AP Featured Product 523 Publications

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Basic Information

Catalog Number:
20960-1-AP

Size:
150ul , Concentration: 600 µg/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG15198

GenBank Accession Number:
BC012527

GeneID (NCBI):
3091

UNIPROT ID:
Q16665

Full Name:
hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)

Calculated MW:
826 aa, 93 kDa

Observed MW:
120 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:2000-1:12000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500
IF 1:200-1:800

Applications

Tested Applications:
WB, IP, IF, FC, IHC, ELISA

Cited Applications:
WB, IP, IF, IHC, CoIP, ChIP, Cell treatment

Species Specificity:
human

Cited Species:
human, goat, chicken, pig

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : Cobalt Chloride treated HeLa cells, HeLa cells

IP : HeLa cells,

IHC : human thyroid cancer tissue, human heart tissue, human kidney tissue

IF : Cobalt Chloride treated HeLa cells, Cobalt Chloride treated HepG2 cells

Background Information

HIF1a, the major regulator of the cellular responses to hypoxia, consists of an oxygen-sensitive subunit, HIF1 alpha (HIF1A), and an oxygen-insensitive subunit, HIF1 beta (arylhydrocarbon receptor nuclear transporter [ARNT]). Under normal oxygen conditions, HIF1a is continuously produced and destroyed, in a process involving hydroxylation, interaction with von Hippel-Lindau (VHL) protein, polyubiquitylation and subsequent proteasomal degradation. Under hypoxic conditions, hydroxylation is impaired and HIF1a is stabilized. HIF1a localizes in cytoplasm in normoxia, but it can translocate into nuclear in response to hypoxia. The calculated molecular weight of HIF1a is 93 kDa, but the modified protein HIF1a is about 110-120kDa (PMID: 11698256, .PMID: 7539918). .

Notable Publications

Author	Pubmed ID	Journal	Application
Menghui Xu	36290677	Antioxidants (Basel)	WB
Di Cui	34586717	Adv Healthc Mater	WB,IHC
Wenmin Yu	34676302	Open Med (Wars)	IHC

Storage

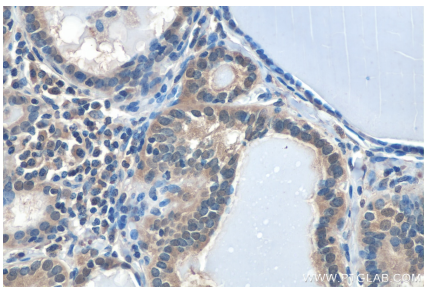
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

***** 20ul sizes contain 0.1% BSA**

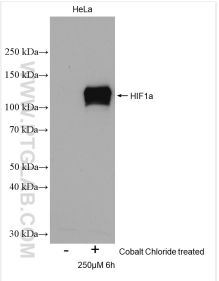
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

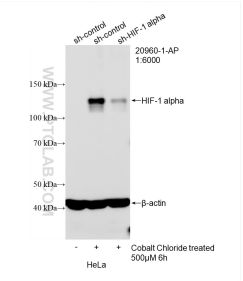
Selected Validation Data



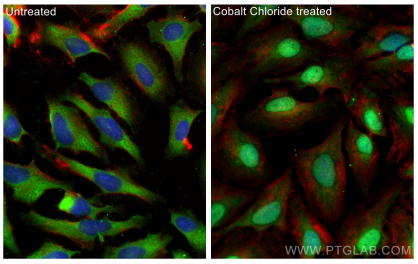
Immunohistochemical analysis of paraffin-embedded human thyroid cancer tissue slide using 20960-1-AP (HIF1a antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



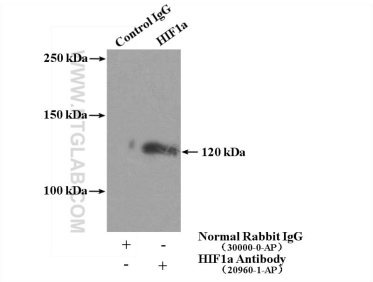
Untreated and Cobalt Chloride treated HeLa cells were subjected to SDS PAGE followed by western blot with 20960-1-AP (HIF1a antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



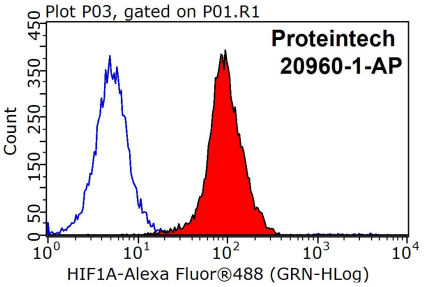
WB result of HIF-1 alpha antibody (20960-1-AP; 1:6000; incubated at room temperature for 1.5 hours) with sh-Control and sh-HIF-1 alpha transfected HeLa cells. Sample 1: non-treated sh-Control transfected HeLa cells, Sample 2: Cobalt Chloride treated sh-Control transfected HeLa cells, Sample 3: Cobalt Chloride treated sh-HIF-1 alpha transfected HeLa cells.



Immunofluorescent analysis of (-20°C Ethanol) fixed Cobalt Chloride treated HeLa cells using HIF-1 alpha antibody (20960-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).



IP result of anti-HIF-1 alpha (IP:20960-1-AP, 4ug; Detection:20960-1-AP 1:300) with HeLa cells lysate 4000ug.



1X10^6 HeLa cells were stained with 0.2ug HIF1a antibody (20960-1-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1000.