

HIF1A Polyclonal Antibody

Catalog Number PA5-23030

Product data sheet

Details		Tested Applications	Dilution *
Size	100 µL	Western Blot (WB)	1 µg/mL
Host/Isotope	Rabbit / IgG	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Class	Polyclonal		
Type	Antibody		
Immunogen	Synthetic peptide made to an internal portion of the human protein (within residues 400-450).		
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

This antibody has 95% sequence homology with bovine, 90% to porcine and 85% sequence homology with mouse and rat.

Background/Target Information

HIF1- α (HIF1A) is a subunit of HIF1, which is a transcription factor found in mammalian cells cultured under reduced oxygen tension. HIF-1 is a heterodimer consisting of an α and β subunit, both belonging to the basic-helix-loop-helix Per-aryl hydrocarbon receptor nuclear translocator-Sim (PAS) family of transcription factors. HIF1 functions as a transcriptional regulator of the adaptive response to hypoxia. Under hypoxic conditions, HIF-1 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. HIF1- α regulates hypoxia-mediated apoptosis, cell proliferation and tumor angiogenesis. Hypoxia which induces p53 protein accumulation, directly interacts with HIF1- α and reduces hypoxia-induced expression of HIF1- α by promoting MDM2-mediated ubiquitination and proteasomal degradation under hypoxic conditions. Recent studies suggest that induction of NOX4 by HIF1- α contributes to maintain ROS levels after hypoxia and hypoxia-induced proliferation. In humans, it is located on the q arm of chromosome 14. The C-terminal of HIF1A binds to p300. p300/CBP-HIF complexes participate in the induction of hypoxia-responsive genes, including VEGF. 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.

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