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Product data sheet

HIF1A Monoclonal Antibody (H1alpha67), DyLight[™] 488

Catalog Number MA5-16009

Details		Species Reactivity	
Size	100 µL	Species reactivity	Bovine, Dog, Cat, Ferret, Human,
Host/Isotope	Mouse / IgG2b		Pig, Rabbit, Rat, Xenopus
Class	Monoclonal	Published species	Rabbit, Rat, Human, Mouse, Not
Туре	Antibody		Аррісавіе
Clone	H1alpha67	Tested Applications	Dilution *
	Fusion protein containing amino	ELISA (ELISA)	Assay-Dependent
Immunogen	acids 432-528 of human HIF-1alpha.	Flow Cytometry (Flow)	Assay-Dependent
Conjugate	DyLight™ 488	Immunohistochemistry (Frozen)	1:100
Form	Liquid		
Concentration	0.72 mg/mL	Immunohistochemistry (Paraffin) (IHC (P))	Assay-Dependent
Purification	Protein G	Western Blot (WB)	1:500
Storage buffer	50mM sodium borate	Immunocytochemistry (ICC/IF)	Assay-Dependent
Contains	0.05% sodium azide	Published Applications	
Storage Conditions	4° C, store in dark	Immunohistochemistry (IHC)	See 19 publications below
		Immunocytochemistry (ICC/IF)	See 1 publications below
		Western Blot (WB)	See 7 publications below

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.

See 1 publications below

Product specific information

In Western blot, multiple bands may be seen at 100-120 kDa representing post-translational modification of HIF-1 alpha. For WB, testing on nuclear extracts is recommended. Suggested positive control: Cos-7 nuclear extracts.

Gel Shift (GS)

Background/Target Information

HIF1-alpha (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 alpha and beta 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-alpha regulates hypoxiamediated apoptosis, cell proliferation and tumor angiogenesis. Hypoxia which induces p53 protein accumulation, directly interacts with HIF1-alpha and reduces hypoxia-induced expression of HIF1-alpha by promoting MDM2-mediated ubiquitination and proteasomal degradation under hypoxic conditions. Recent studies suggest that induction of NOX4 by HIF1-alpha 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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