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HIF1 beta Rabbit mAb

Catalog # AP76527

Product Information

Application	WB, IHC-P, FC
Primary Accession	P27540
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	86636

Additional Information

Gene ID	405
Other Names	ARNT
Dilution	WB~~1:1000 IHC-P~~N/A FC~~1:10~50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	ARNT (HGNC:700)
Synonyms	BHLHE2
Function	Transcription factor that functions as an obligate heterodimerization partner for several basic helix-loop-helix PER-ARNT- SIM (bHLH-PAS) proteins. Forms heterodimers with the aryl hydrocarbon receptor (AHR) to mediate the transcriptional response to xenobiotics by binding xenobiotic response elements (XREs) or dioxin response elements (DREs) in target gene promoters (PubMed:28396409, PubMed:34521881). Also heterodimerizes with hypoxia-inducible factor alpha subunits (HIF1A, EPAS1, NPAS1 or NPAS3) to form hypoxia-inducible transcription factors that bind hypoxia response elements (HREs) and activate genes involved in cellular and systemic responses to hypoxia, including angiogenesis, erythropoiesis, and metabolic adaptation (PubMed:16181639, PubMed:20699359). Plays a central role in environmental sensing and developmental and physiological regulation of gene expression (PubMed:34521881).

Cellular Location	Nucleus.

Background

HIF-1β is also known as AhR nuclear translocator (ARNT) due to its ability to partner with the aryl hydrocarbon receptor (AhR) to form a heterodimeric transcription factor complex. Together with AhR, HIF-1β plays an important role in xenobiotics metabolism. In addition, a chromosomal translocation leading to a TEL-ARNT fusion protein is associated with acute myeloblastic leukemia. Studies also found that ARNT/HIF-1β expression levels decrease significantly in pancreatic islets from patients with type 2 diabetes, suggesting that HIF-1β plays an important role in pancreatic β-cell function.

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