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HIF-1 β/ARNT Monoclonal Antibody(4C5)

Catalog # AP63712

Product Information

Application	WB, IHC-P, IF, ICC
Primary Accession	P27540
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	86636

Additional Information

Gene ID	405
Other Names	ARNT; BHLHE2; Aryl hydrocarbon receptor nuclear translocator; ARNT protein; Class E basic helix-loop-helix protein 2; bHLHe2; Dioxin receptor, nuclear translocator; Hypoxia-inducible factor 1-beta; HIF-1-beta; HIF1-beta
Dilution	WB~~WB 1:1000-2000, IHC 1:100-200 IHC-P~~WB 1:1000-2000, IHC 1:100-200 IF~~1:50~200 ICC~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

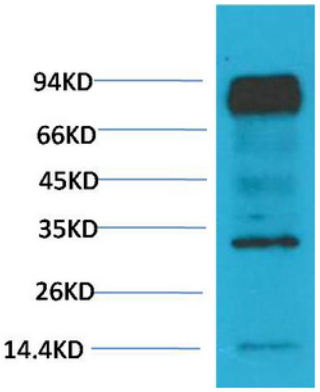
Name	ARNT (HGNC:700)
Synonyms	BHLHE2
Function	Transcription factor that functions as an obligate heterodimerization partner for several basic helix-loop-helix PER-ARNT- SIM (bHLH-PAS) proteins. Forms heterodimers with the aryl hydrocarbon receptor (AHR) to mediate the transcriptional response to xenobiotics 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.

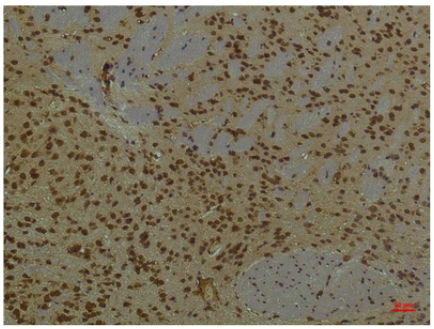
Background

Required for activity of the Ah (dioxin) receptor. This protein is required for the ligand-binding subunit to translocate from the cytosol to the nucleus after ligand binding. The complex then initiates transcription of genes involved in the activation of PAH procarcinogens. The heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters and functions as a transcriptional regulator of the adaptive response to hypoxia (By similarity). The heterodimer ARNT:AHR binds to core DNA sequence 5'-TGCGTG-3' within the dioxin response element (DRE) of target gene promoters and activates their transcription (PubMed:28396409).

Images



Western blot analysis of Mouse Brain Tissue with HIF-1 β/ARNT Mouse mAb diluted at 1:2,000.



Immunohistochemical analysis of paraffin-embedded Mouse BrainTissue using HIF-1 β/ARNT Mouse mAb diluted at 1:200.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.