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ARNT Antibody (Center V528)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14310c

Specification

ARNT Antibody (Center V528) - Product Information

Application	**WB, IF,E**
Primary Accession	P27540
Other Accession	Q9BE97, NP_848514.1, NP_001659.1
Reactivity	**Human**
Predicted	**Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**86636**
Antigen Region	**513-544**

ARNT Antibody (Center V528) - Additional Information

Gene ID 405

Other Names
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, ARNT, BHLHE2

Target/Specificity
This ARNT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 513-544 amino acids from the Central region of human ARNT.

Dilution
WB~~1:1000
IF~~1:10~50
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
ARNT Antibody (Center V528) is for research use only and not for use in diagnostic or therapeutic procedures.

ARNT Antibody (Center V528) - Protein Information

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Name ARNT (HGNC:700)

Synonyms BHLHE2

Function Required for activity of the AHR. Upon ligand binding, AHR translocates into the nucleus, where it heterodimerizes with ARNT and induces transcription by binding to xenobiotic response elements (XRE). Not required for the ligand-binding subunit to translocate from the cytosol to the nucleus after ligand binding (PubMed:34521881). The complex initiates transcription of genes involved in the regulation of a variety of biological processes, including angiogenesis, hematopoiesis, drug and lipid metabolism, cell motility and immune modulation (Probable). 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).

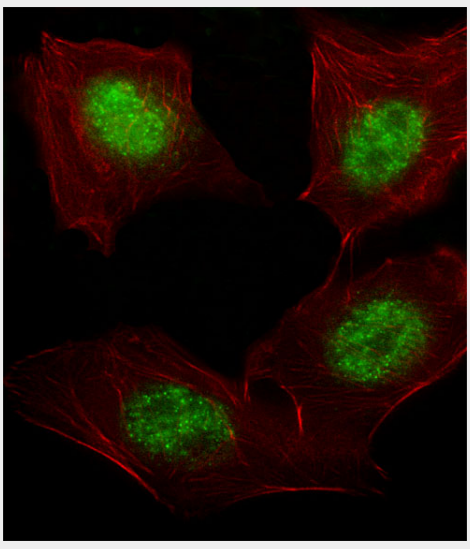
Cellular Location
Nucleus.

ARNT Antibody (Center V528) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ARNT Antibody (Center V528) - Images



Fluorescent image of A549 cell stained with hARNT-V528(Cat#AP14310c).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with hARNT primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated

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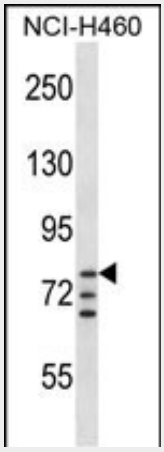
donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃).hARNT immunoreactivity is localized to Nucleus significantly.



ARNT Antibody (V528) (Cat. #AP14310c) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the ARNT antibody detected the ARNT protein (arrow).

ARNT Antibody (Center V528) - Background

The aryl hydrocarbon (Ah) receptor is involved in the induction of several enzymes that participate in xenobiotic metabolism. The ligand-free, cytosolic form of the Ah receptor is complexed to heat shock protein 90. Binding of ligand, which includes dioxin and polycyclic aromatic hydrocarbons, results in translocation of the ligand-binding subunit only to the nucleus. Induction of enzymes involved in xenobiotic metabolism occurs through binding of the ligand-bound Ah receptor to xenobiotic responsive elements in the promoters of genes for these enzymes. This gene encodes a protein that forms a complex with the ligand-bound Ah receptor, and is required for receptor function. The encoded protein has also been identified as the beta subunit of a heterodimeric transcription factor, hypoxia-inducible factor 1. A t(1;12)(q21;p13) translocation, which results in a TEL-ARNT fusion protein, is associated with acute myeloblastic leukemia. Alternative splicing results in multiple transcript variants.

ARNT Antibody (Center V528) - References

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