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ARNT Antibody (Center V528) Blocking Peptide

Synthetic peptide
Catalog # BP14310c

Specification

ARNT Antibody (Center V528) Blocking Peptide - Product Information

Primary Accession P27540

ARNT Antibody (Center V528) Blocking Peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ARNT Antibody (Center V528) Blocking Peptide - Protein Information

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) Blocking Peptide - Protocols

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

- Blocking Peptides

ARNT Antibody (Center V528) Blocking Peptide - Images

ARNT Antibody (Center V528) Blocking Peptide - Background

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

ARNT Antibody (Center V528) Blocking Peptide - References

Otsubo, K., et al. Cancer Genet. Cytogenet. 202(1):22-26(2010)Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :Kewley, R.J., et al. Biochem. Biophys. Res. Commun. 338(1):660-667(2005)Kewley, R.J., et al. Biochem. Biophys. Res. Commun. 338(1):660-667(2005)