

**ARNT / HIF-1-Beta Antibody (clone 3D10)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS14310****Specification**

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**ARNT / HIF-1-Beta Antibody (clone 3D10) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IF, IHC            |
| Primary Accession | <a href="#">P27540</a> |
| Reactivity        | Human                  |
| Host              | Mouse                  |
| Clonality         | Monoclonal             |
| Calculated MW     | 87kDa KDa              |

**ARNT / HIF-1-Beta Antibody (clone 3D10) - 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**

Human ARNT

**Reconstitution & Storage**

Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.

**Precautions**

ARNT / HIF-1-Beta Antibody (clone 3D10) is for research use only and not for use in diagnostic or therapeutic procedures.

**ARNT / HIF-1-Beta Antibody (clone 3D10) - 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:<a href="http://www.uniprot.org/citations/34521881" target="\_blank">34521881</a>). 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:<a href="http://www.uniprot.org/citations/28396409" target="\_blank">28396409</a>).

#### Cellular Location

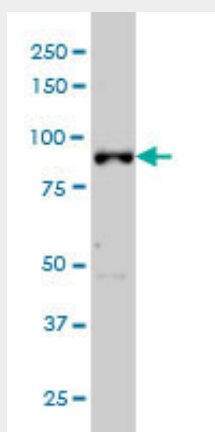
Nucleus.

#### ARNT / HIF-1-Beta Antibody (clone 3D10) - Protocols

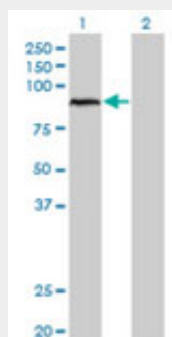
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

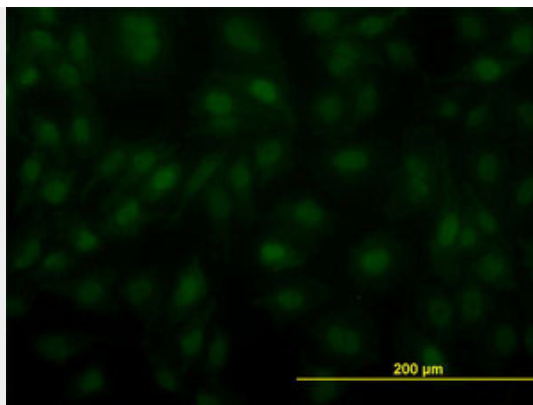
#### ARNT / HIF-1-Beta Antibody (clone 3D10) - Images



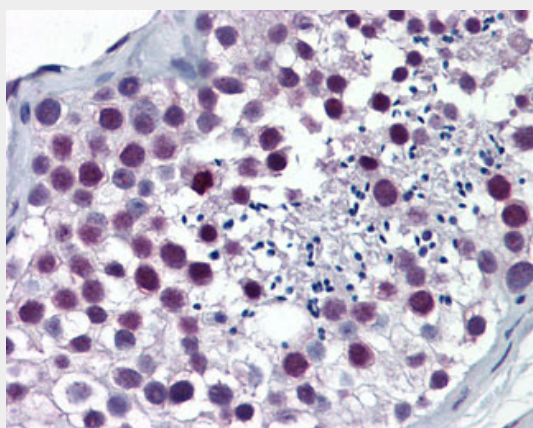
Western blot of ARNT expression in HeLa nuclear extract.



Western blot of ARNT expression in transfected 293T cell line.



Immunofluorescence of monoclonal antibody to ARNT on HeLa cell. [antibody concentration 10 ug/ml]



Anti-ARNT antibody IHC of human testis.

#### **ARNT / HIF-1-Beta Antibody (clone 3D10) - 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 with HIF1A or EPAS1/HIF2A functions as a transcriptional regulator of the adaptive response to hypoxia.

#### **ARNT / HIF-1-Beta Antibody (clone 3D10) - References**

Hoffman E.C.,et al.Science 252:954-958(1991).  
Scheel J.,et al.Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Totoki Y.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.  
Wiemann S.,et al.Genome Res. 11:422-435(2001).