

**ARNT /ARNT2 Antibody Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP2508a****Specification**

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**ARNT /ARNT2 Antibody Blocking peptide - Product Information**Primary Accession [Q9HBZ2](#)**ARNT /ARNT2 Antibody Blocking peptide - Additional Information****Gene ID** 9915**Other Names**

Aryl hydrocarbon receptor nuclear translocator 2, ARNT protein 2, Class E basic helix-loop-helix protein 1, bHLHe1, ARNT2, BHLHE1, KIAA0307

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP2508a](/product/products/AP2508a) is KTGTV<B>KKEG</B>QQSSMRCA containing a predicted sumoylation site from the N-terminal region of human ARNT2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**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 /ARNT2 Antibody Blocking peptide - Protein Information****Name** ARNT2**Synonyms** BHLHE1, KIAA0307**Function**

Transcription factor that plays a role in the development of the hypothalamo-pituitary axis, postnatal brain growth, and visual and renal function (PubMed:<http://www.uniprot.org/citations/24022475> target="\_blank">24022475</a>). Specifically recognizes the xenobiotic response element (XRE).

**Cellular Location**

Nucleus {ECO:0000255|PROSITE-ProRule:PRU00981, ECO:0000269|PubMed:24465693}

## **ARNT /ARNT2 Antibody Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

## **ARNT /ARNT2 Antibody Blocking peptide - Images**

## **ARNT /ARNT2 Antibody Blocking peptide - 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 (HIF1). A t(1;12)(q21;p13) translocation, which results in a TEL-ARNT fusion protein, is associated with leukemia. Sumoylation of ARNT modulates the ability of ARNT to interact with cooperative molecules such as PML, thereby regulating the transcriptional role of ARNT. This exemplifies a crucial role of protein sumoylation in modulating protein-protein interactions.

## **ARNT /ARNT2 Antibody Blocking peptide - References**

Tojo, et al., J Biol Chem. 2002 Nov 29;277(48):46576-85. Barrow, L.L., et al., Teratology 66(2):85-90 (2002). Nagase, T., et al., DNA Res. 4(2):141-150 (1997).