ARNT2 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	ARNT2, Monoclonal Antibody
Full Product Name	ARNT2 (Aryl Hydrocarbon Receptor Nuclear Translocator 2, ARNT Protein 2, Class E Basic Helix-loop-helix Protein 1, bHLHe1, BHLHE1, KIAA0307) (MaxLight 490)
Product Gene Name	anti-ARNT2 antibody
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Number	1B2
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human ARNT2.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
OMIM	606036
3D Structure	ModBase 3D Structure for Q9HBZ2
Immunogen	Partial recombinant corresponding to aa464-563 from ARNT2 (NP_055677) with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	VPVPNLPAGVHEAGKSVEKADAIFSQERDPRFAEMFAGISASEKKMMSSASAAGTQQIYSQGSPFPSGHSGKAFSSSVVHVPGVNDIQSSSSTGQNMSQ
Conjugate	MaxLight490
Product Categories/Family for anti-ARNT2 antibody	Antibodies; Transcription Factors
Applications Tested/Suitable for anti-ARNT2 antibody	FLISA, Western Blot (WB)
Application Notes for anti-ARNT2 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-ARNT2 antibody	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.
Other Notes	Small volumes of anti-ARNT2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ARNT2 purchase	MBS6199609 is an antibody targeting ARNT2. Also known as ARNT2 (Aryl Hydrocarbon Receptor Nuclear Translocator 2, ARNT Protein 2, Class E Basic Helix-loop-helix Protein 1, bHLHe1, BHLHE1, KIAA0307) (MaxLight 490). Reactive in Human. Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ARNT2. It may not necessarily be applicable to this product.

NCBI GI #	1519243731
NCBI GeneID	9915
NCBI Accession #	NM_014862.4
UniProt Primary Accession #	Q9HBZ2
UniProt Related Accession #	Q9HBZ2
GenBank Nucleotide #	NM_014862
NCBI Official Full Name	Homo sapiens aryl hydrocarbon receptor nuclear translocator 2 (ARNT2), mRNA
NCBI Official Synonym Full Names	aryl hydrocarbon receptor nuclear translocator 2
NCBI Official Symbol	ARNT2
NCBI Official Synonym Symbols	WEDAS; bHLHe1
UniProt Protein Name	Aryl hydrocarbon receptor nuclear translocator 2
UniProt Synonym Protein Names	Class E basic helix-loop-helix protein 1
Protein Family	Aryl hydrocarbon receptor nuclear translocator
UniProt Gene Name	ARNT2
UniProt Synonym Gene Names	BHLHE1; KIAA0307; ARNT protein 2; bHLHe1
UniProt Entry Name	ARNT2_HUMAN
NCBI Protein Information	aryl hydrocarbon receptor nuclear translocator 2
NCBI Summary for ARNT2	This gene encodes a member of the basic-helix-loop-helix-Per-Arnt-Sim (bHLH-PAS) superfamily of transcription factors. The encoded protein acts as a partner for several sensor proteins of the bHLH-PAS family, forming heterodimers with the sensor proteins that bind regulatory DNA sequences in genes responsive to developmental and environmental stimuli. Under hypoxic conditions, the encoded protein complexes with hypoxia-inducible factor 1alpha in the nucleus and this complex binds to hypoxia-responsive elements in enhancers and promoters of oxygen-responsive genes. A highly similar protein in mouse forms functional complexes with both aryl hydrocarbon receptors and Single-minded proteins, suggesting additional roles for the encoded protein in the metabolism of xenobiotic compounds and the regulation of neurogenesis, respectively. [provided by RefSeq, Dec 2013]

UniProt Comments for ARNT2	ARNT2: Specifically recognizes the xenobiotic response element (XRE). 2 isoforms of the human protein are produced by alternative splicing. Protein type: Transcription factor; DNA-binding; Apoptosis Chromosomal Location of Human Ortholog: 15q24 Cellular Component: transcription factor complex; cytoplasm; nucleus Molecular Function: signal transducer activity; DNA binding; aryl hydrocarbon receptor binding; protein heterodimerization activity; transcription factor activity Biological Process: central nervous system development; regulation of transcription, DNA-dependent; transcription, DNA-dependent; in utero embryonic development; positive regulation of transcription, DNA-dependent; positive regulation of cell proliferation; response to hypoxia; positive regulation of transcription from RNA polymerase II promoter; brain development; signal transduction; response to estradiol stimulus; negative regulation of apoptosis Disease: Webb-dattani Syndrome
Research Articles on ARNT2	**1.** Immunohistochemistry confirmed ARNT2 expression in cell sub-populations within proliferative zones of patients' glioblastoma. Decreased ARNT2 expression was consistently observed in non-tumorigenic glioblastoma cells, compared to tumorigenic cells. Moreover, ARNT2 expression correlated with a tumorigenic molecular signature at both the tissue level within the tumor core and at the single cell level in the patients' tumors
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