

AHR Antibody (clone 3B9)
Mouse Monoclonal Antibody
Catalog # ALS14306**Specification**

AHR Antibody (clone 3B9) - Product Information

Application	IHC
Primary Accession	P35869
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	96kDa KDa

AHR Antibody (clone 3B9) - Additional Information**Gene ID** 196**Other Names**

Aryl hydrocarbon receptor, Ah receptor, AhR, Class E basic helix-loop-helix protein 76, bHLHe76, AHR, BHLHE76

Target/Specificity

Human AH Receptor

Reconstitution & Storage

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

Precautions

AHR Antibody (clone 3B9) is for research use only and not for use in diagnostic or therapeutic procedures.

AHR Antibody (clone 3B9) - Protein Information**Name** AHR {ECO:0000303|PubMed:8393992, ECO:0000312|HGNC:HGNC:348}**Function**

Ligand-activated transcription factor that enables cells to adapt to changing conditions by sensing compounds from the environment, diet, microbiome and cellular metabolism, and which plays important roles in development, immunity and cancer (PubMed:[30373764](http://www.uniprot.org/citations/30373764), PubMed:[23275542](http://www.uniprot.org/citations/23275542), PubMed:[7961644](http://www.uniprot.org/citations/7961644), PubMed:[32818467](http://www.uniprot.org/citations/32818467)). Upon ligand binding, translocates into the nucleus, where it heterodimerizes with ARNT and induces transcription by binding to xenobiotic response elements (XRE) (PubMed:[30373764](http://www.uniprot.org/citations/30373764), PubMed:[23275542](http://www.uniprot.org/citations/23275542), PubMed:[7961644](http://www.uniprot.org/citations/7961644)). Regulates a

variety of biological processes, including angiogenesis, hematopoiesis, drug and lipid metabolism, cell motility and immune modulation (PubMed:12213388). Xenobiotics can act as ligands: upon xenobiotic- binding, activates the expression of multiple phase I and II xenobiotic chemical metabolizing enzyme genes (such as the CYP1A1 gene) (PubMed:7961644). Mediates biochemical and toxic effects of halogenated aromatic hydrocarbons (PubMed:7961644, PubMed:34521881). Next to xenobiotics, natural ligands derived from plants, microbiota, and endogenous metabolism are potent AHR agonists (PubMed:18076143). Tryptophan (Trp) derivatives constitute an important class of endogenous AHR ligands (PubMed:32866000, PubMed:32818467). Acts as a negative regulator of anti-tumor immunity: indoles and kynurenic acid generated by Trp catabolism act as ligand and activate AHR, thereby promoting AHR-driven cancer cell motility and suppressing adaptive immunity (PubMed:32818467). Regulates the circadian clock by inhibiting the basal and circadian expression of the core circadian component PER1 (PubMed:28602820). Inhibits PER1 by repressing the CLOCK-BMAL1 heterodimer mediated transcriptional activation of PER1 (PubMed:28602820). 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:28602820).

Cellular Location

Cytoplasm. Nucleus. Note=Initially cytoplasmic; upon binding with ligand and interaction with a HSP90, it translocates to the nucleus.

Tissue Location

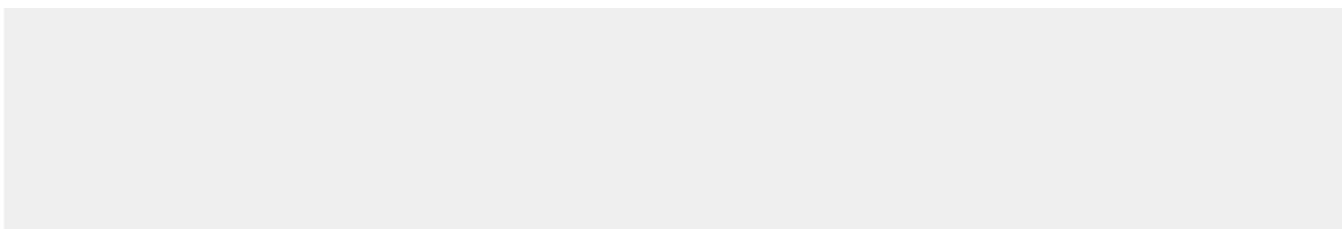
Expressed in all tissues tested including blood, brain, heart, kidney, liver, lung, pancreas and skeletal muscle Expressed in retinal photoreceptors (PubMed:29726989)

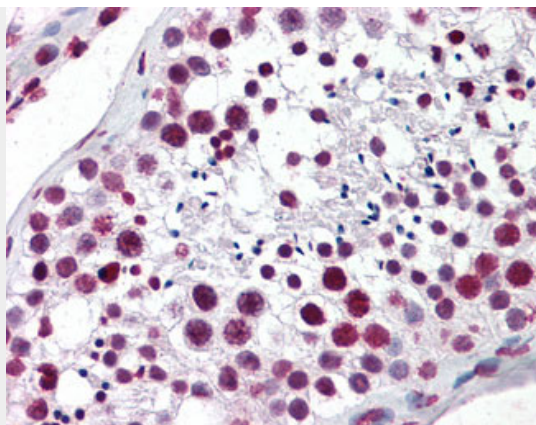
AHR Antibody (clone 3B9) - Protocols

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](#)

AHR Antibody (clone 3B9) - Images





Anti-Aryl Hydrocarbon Receptor antibody IHC of human testis.

AHR Antibody (clone 3B9) - Background

Ligand-activated transcriptional activator. Binds to the XRE promoter region of genes it activates. Activates the expression of multiple phase I and II xenobiotic chemical metabolizing enzyme genes (such as the CYP1A1 gene). Mediates biochemical and toxic effects of halogenated aromatic hydrocarbons. Involved in cell-cycle regulation. Likely to play an important role in the development and maturation of many tissues. Regulates the circadian clock by inhibiting the basal and circadian expression of the core circadian component PER1. Inhibits PER1 by repressing the CLOCK-ARNTL/BMAL1 heterodimer mediated transcriptional activation of PER1.

AHR Antibody (clone 3B9) - References

Itoh S.,et al.Nucleic Acids Res. 21:3578-3578(1993).
Dolwick K.M.,et al.Mol. Pharmacol. 44:911-917(1993).
Ema M.,et al.J. Biochem. 116:845-851(1994).
Scherer S.W.,et al.Science 300:767-772(2003).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.