

AHR Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5533c

Specification

AHR Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P35869
Other Accession	NP_001612.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	555-582

AHR Antibody (Center) - 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

This AHR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 555-582 amino acids from the Central region of human AHR.

Dilution

WB~~1:500

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

AHR Antibody (Center) - 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](#), PubMed:[23275542](#), PubMed:[7961644](#), PubMed:[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](#), PubMed:[23275542](#), PubMed:[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

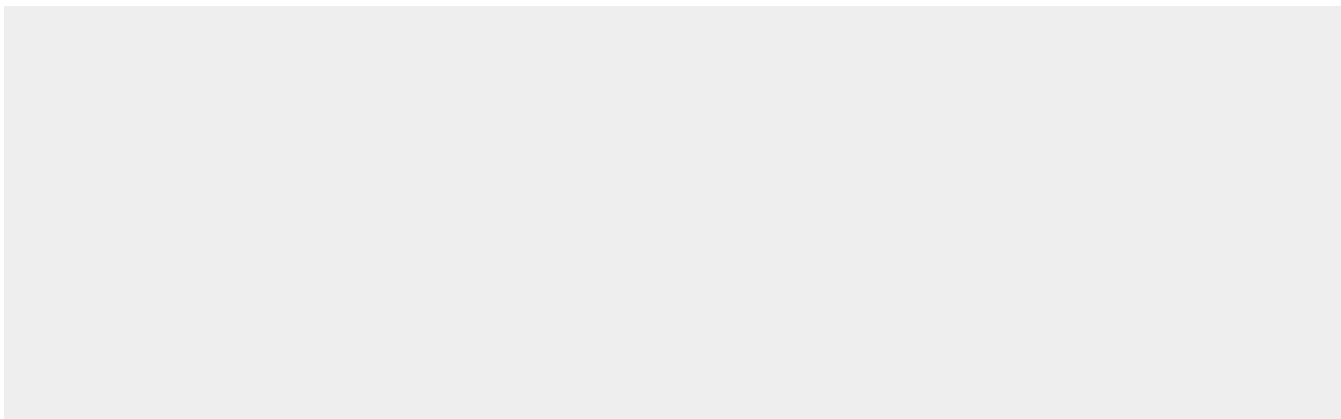
Expressed in all tissues tested including blood, brain, heart, kidney, liver, lung, pancreas and skeletal muscle Expressed in retinal photoreceptors (PubMed:29726989)

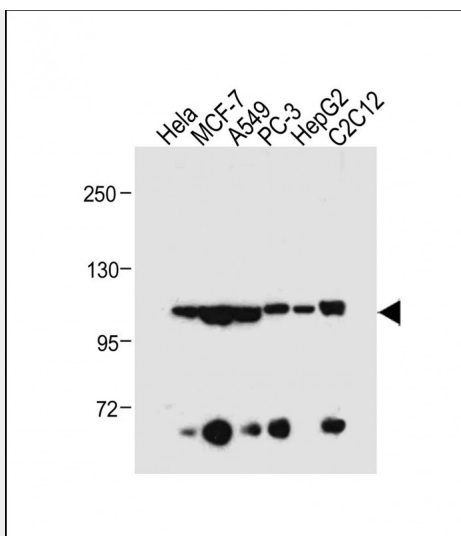
AHR Antibody (Center) - Protocols

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 (Center) - Images





All lanes : Anti-AHR Antibody (Center) at 1:500 dilution Lane 1: HeLa whole cell lysate Lane 2: MCF-7 whole cell lysate Lane 3: A549 whole cell lysate Lane 4: PC-3 whole cell lysate Lane 5: HepG2 whole cell lysate Lane 6: C2C12 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 96 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

AHR Antibody (Center) - Background

AHR is a ligand-activated transcription factor involved in the regulation of biological responses to planar aromatic hydrocarbons. This receptor has been shown to regulate xenobiotic-metabolizing enzymes such as cytochrome P450. Its ligands included a variety of aromatic hydrocarbons. [provided by RefSeq].

AHR Antibody (Center) - References

Davila, S., et al. Genes Immun. (2010) In press :
Kalthoff, S., et al. J. Biol. Chem. 285(9):5993-6002(2010)
Hall, J.M., et al. Mol. Endocrinol. 24(2):359-369(2010)
Schroeder, J.C., et al. Biochemistry 49(2):393-400(2010)