

Product Name: AhR (3U15) Rabbit Monoclonal Antibody
Catalog #: AMRe06693



Summary

Production Name	AhR (3U15) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	AHR {ECO:0000303 PubMed:8393992, ECO:0000312 HGNC:HGNC:348}
Alternative Names	Ah receptor; AhR; Class E basic helix-loop-helix protein 76; bHLHe76; AHR;
Gene ID	196.0
SwissProt ID	P35869.A synthetic peptide of human Aryl hydrocarbon Receptor

Application

Dilution Ratio	WB: 1:1000
Molecular Weight	96kDa

Background

The aryl hydrocarbon receptor (AhR) is a ligand activated transcription factor involved in xenobiotic metabolism, cell cycle

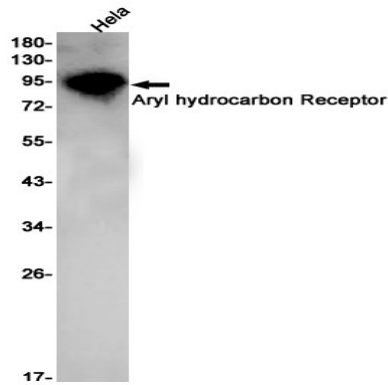
regulation, and development in response to both endogenous and environmental signals. Involved in cell-cycle regulation. Likely to play an important role in the development and maturation of many tissues. Ligand-activated transcription factor that enables cells to adapt to changing conditions by sensing 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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/7961644)). Mediates biochemical and toxic effects of halogenated aromatic hydrocarbons (PubMed:[7961644](http://www.uniprot.org/citations/7961644)). Next to xenobiotics, natural ligands derived from plants, microbiota, and endogenous metabolism are potent AHR agonists (PubMed:[18076143](http://www.uniprot.org/citations/18076143)). Tryptophan (Trp) derivatives constitute an important class of endogenous AHR ligands (PubMed:[32866000](http://www.uniprot.org/citations/32866000), PubMed:[32818467](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/32818467)). Regulates the circadian clock by inhibiting the basal and circadian expression of the core circadian component PER1 (PubMed:[28602820](http://www.uniprot.org/citations/28602820)). Inhibits PER1 by repressing the CLOCK-ARNTL/BMAL1 heterodimer mediated transcriptional activation of PER1 (PubMed:[28602820](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/28602820)).

Research Area

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Image Data



Western blot detection of Aryl hydrocarbon Receptor in HeLa cell lysates using Aryl hydrocarbon Receptor antibody(1:1000 diluted).

Note

For research use only.