10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Aryl hydrocarbon Receptor Rabbit mAb

Catalog # AP75108

Product Information

Application	WB
Primary Accession	P35869
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	96147

Additional Information

Gene ID	196
Other Names	AHR
Dilution	WB~~1:500-1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

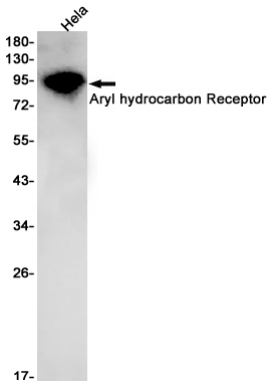
Name	AHR {ECO:0000303|PubMed:8393992, ECO:0000312|HGNC:HGNC:348}
Function	Ligand-activated transcription factor that enables cells to adapt to changing conditions by sensing compounds from the environment, diet, microbiome and cellular metabolism, and which plays important roles in development, immunity and cancer (PubMed:23275542, PubMed:30373764, PubMed:32818467, PubMed:7961644). Upon ligand binding, translocates into the nucleus, where it heterodimerizes with ARNT and induces transcription by binding to xenobiotic response elements (XRE) (PubMed:23275542, PubMed:30373764, 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, PubMed:33193710). Mediates biochemical and toxic effects of halogenated aromatic hydrocarbons (PubMed:34521881, PubMed:7961644). 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:32818467, PubMed:32866000). 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 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)

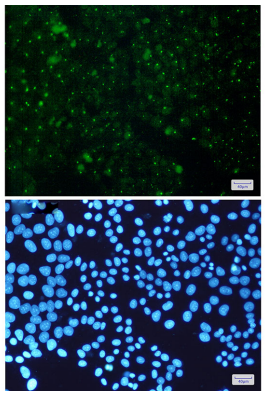
Background

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.

Images



Western blot analysis of Aryl hydrocarbon Receptor in Hela lysates using Aryl Hydrocarbon Receptor antibody.



Immunocytochemistry analysis of Aryl hydrocarbon Receptor(green) in Hela using Aryl hydrocarbon Receptor antibody,and DAPI(blue)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.