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AHR Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP5533c

Specification

AHR Antibody (Center) Blocking peptide - Product Information

Primary Accession	P35869
Other Accession	NP_001612.1

AHR Antibody (Center) Blocking peptide - Additional Information

Gene ID 196

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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

AHR Antibody (Center) Blocking peptide - 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 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) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

AHR Antibody (Center) Blocking peptide - Images

AHR Antibody (Center) Blocking peptide - Background

AHR is a ligand-activated transcription factorinvolved in the regulation of biological responses to planararomatic hydrocarbons. This receptor has been shown to regulatexenobiotic-metabolizing enzymes such as cytochrome P450. Itsligands included a variety of aromatic hydrocarbons. [provided byRefSeq].

AHR Antibody (Center) Blocking peptide - 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)