Cytosolic dioxin receptor, also referred to as Ah receptor, translocates to the nucleus upon binding of ligand. Ligands include dioxin and polycyclic aromatic hydrocarbons (PAH). The complex then initiates transcription of a battery of genes involved in the activation of PAH procarcinogens. Ah receptor is a heterodimer consisting of the ligand-binding aryl hydrocarbon receptor (AHR) and the 87kDa ARNT subunit. AHR is structurally related to HIF1-alpha and MOP2. Even though, these three proteins have different expression profiles, but they all share ARNT as a common dimeric partner. The heterodimerization is dependent on the bHLH and PAS domains of AHR. There is a substantial polymorphisms that regulates the phenotype of AHR-mediated responses among different ethnic groups. Constitutive activation of AHR may also play a role in adult T-cell leukemia (ATL) development. DNA damage and cell cycle arrest induced by 2-(4-amino-3-methylphenyl)-5-fluorobenzothiazole (5F203, NSC 703786) is attenuated in aryl hydrocarbon receptor deficient MCF-7 cells. Phylogenetic analysis shows that AHRR, AHR, and AHR2 are all members of the AHR gene family and descended from a single invertebrate AHR.

Buffers
Purified rabbit polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column and eluted out with both high and low pH buffers and neutralized immediately after elution then followed by dialysis against PBS.

Immunogen
KLH conjugated synthetic peptide comprised of amino acids 826 - 844 [QPLHHPSEARPFPDLTS] of the human aryl hydrocarbon receptor (AHR) protein.

Application
Tested by peptide-specific ELISA (1:1,000).

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

References: