

# AHR Monoclonal Antibody (4MEJJ), PE, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Host/Isotope	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	4MEJJ
Conjugate	PE
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2572644

Applications	Tested	Dilution	Published
Flow Cytometry (Flow)	✓	1 µg/test	1 Publication

## Product Specific Information

Description: This 4MEJJ monoclonal antibody recognizes mouse aryl hydrocarbon receptor (AHR). The AHR is a ligand-activated transcription factor that mediates the toxic effects of a diverse group of environmental contaminants, most notably aryl hydrocarbons such as polychlorinated biphenyls (PCB) and tetrachlorodibenzo-p-dioxin (TCDD). The AHR has also been shown to bind to a number of naturally occurring compounds found in fruits and vegetables as well as compounds generated through normal cellular metabolism. AHR is localized in the cytoplasm in a complex that includes HSP90, p23, and XAP2/AIP/ARA9. Upon ligand-binding, AHR translocates to the nucleus and binds with aryl hydrocarbon receptor nuclear translocator (ARNT), and this complex binds to the consensus DNA sequence, GCGTG, found in the promoter/enhancer regions of many genes such as CYP1A1. The AHR is expressed in many cell types, with highest expression levels found in liver. The AHR has been shown to play a role in the regulation/differentiation of Treg and Th17 cells.

The 4MEJJ monoclonal antibody has been found to recognize the b-1, b-2 and d alleles of mouse AHR but does not crossreact with human AHR.

Applications Reported: This 4MEJJ antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested: This 4MEJJ antibody has been tested by intracellular staining and flow cytometric analysis of 3-day Th17-polarized mouse splenocytes using the Intracellular Fixation and Permeabilization Buffer Set (cat. 88-8824) and protocol. Please refer to Best Protocols: Protocol A: Two step protocol for (cytoplasmic) intracellular proteins located under the Resources Tab online. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

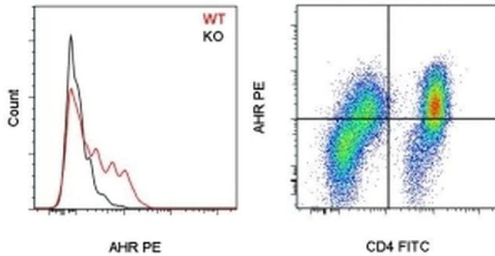
Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

## Product Images For AHR Monoclonal Antibody (4MEJJ), PE, eBioscience™

### AHR Antibody (12-5925-82) in Flow

Left: Splenocytes from C57BL/6 mice (WT, red histogram) or AHR-knockout mice (KO, black histogram) were polarized under Th17 conditions for 3 days. Cells were stained with Fixable Viability Dye eFluor® 780 (Product # 65-0865-14), fixed and permeabilized with IC Fixation and Permeabilization Buffers (Product # 00-8222 and Product # 00-8333-56), and then intracellularly stained with Anti-Mouse CD4 PerCP-eFluor® 710 (Product # 46-0042-82) and 1.0 µg of Anti-Mouse AHR PE. Viable CD4+ cells were used for analysis. Right: C57BL/6 splenocytes were polarized under Th17 conditions for 3 days. Cells were stained with Fixable Viability Dye eFluor® 780 (Product # 65-0865-14), fixed and permeabilized with IC Fixation and Permeabilization Buffers (Product # 00-8222-49 and Product # 00-8333-56), and then intracellularly stained with Anti-Mouse CD4 FITC (Product # 11-0042-82) and 1.0 µg of Rat IgG2a K Isotype Control PE (Product # 12-4321-80) or 0.5 µg of Anti-Mouse AHR PE. Total viable lymphocytes were used for analysis and quadrant lines were drawn based on isotype control.



## 1 Reference

### Flow Cytometry (1)

International journal of toxicology

#### 7,12-Dimethylbenz(a)anthracene-induced myelotoxicity differs in mice selected for high or low acute inflammatory response: relationship with aryl hydrocarbon receptor polymorphism.

Authors: Katz IS, Albuquerque LL, Suppa AP, de Siqueira DM, Rossato C, da Silva GB, Jensen JR, Starobinas N, Cabrera WH, De Franco M, Borelli P, Ibañez OM, Ribeiro OG

Species

Not Applicable

Dilution

Not Cited

Year

2014

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