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.

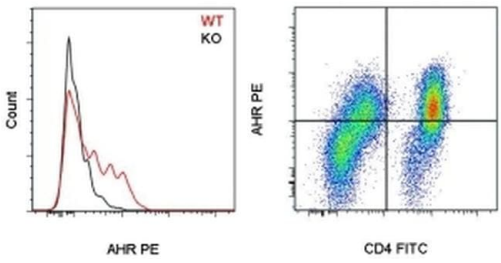
Applications Reported: This 4MEJJ antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

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 10^5 to 10^8 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. Cell 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. Cell 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