

AHR Monoclonal Antibody (4MEJJ), PE-Cyanine7, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), PE-Cyanine7, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	4MEJJ
Conjugate	PE-Cyanine7
Excitation/Emission Max	569/780 nm
Immunogen	E. coli derived, His-tagged AHR (aa 443-805)
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2573501

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.5 µg/test	3 Publications

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 Th17-polarized mouse splenocytes using the Intracellular Fixation & Permeabilization Buffer Set (Product # 88-8824-00 and protocol. Please refer to Best Protocols: Protocol A: Two step protocol for (cytoplasmic) intracellular proteins located under the Resources Tab online. This antibody can be used at less than or equal to 0.5 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 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

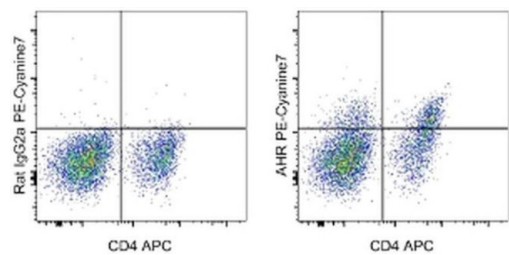
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (Product # 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488-561 nm; Emission: 775 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For AHR Monoclonal Antibody (4MEJJ), PE-Cyanine7, eBioscience™



AHR Antibody (25-5925-82) in Flow
Splenocytes from C57BL/6 mice were polarized under Th17 conditions for 3 days, stained with Fixable Viability Dye eFluor® 506 (Product # 65-0866-14), fixed and permeabilized with the Intracellular Fixation & Permeabilization Buffer Set (Product # 88-8824-00), and then intracellularly stained with Anti-Mouse CD4 APC (Product # 17-0042-82) and 0.25 µg of Rat IgG2a K Isotype Control PE-Cyanine7 (Product # 25-4321-82) (left) or 0.25 µg of Anti-Mouse AHR PE-Cyanine7 (right). Viable cells in the lymphogate, as determined by Fixable Viability Dye eFluor® 506 (Product # 65-0866-14), were used for analysis.

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3 References

Flow Cytometry (3)

<p>Nature communications</p> <p>The neutrophil antimicrobial peptide cathelicidin promotes Th17 differentiation.</p> <p>"Published figure using AHR monoclonal antibody (Product # 25-5925-82) in Flow Cytometry"</p> <p>Authors: Minns D,Smith KJ,Alessandrini V,Hardisty G,Melrose L,Jackson-Jones L,MacDonald AS,Davidson DJ,Gwyer Findlay E</p>	<p>Year</p> <p>2021</p>
<p>Nature communications</p> <p>Blockade of the AHR restricts a Treg-macrophage suppressive axis induced by L-Kynurenine.</p> <p>"Published figure using AHR monoclonal antibody (Product # 25-5925-82) in Flow Cytometry"</p> <p>Authors: Campesato LF,Budhu S,Tchaicha J,Weng CH,Gigoux M,Cohen IJ,Redmond D,Mangarin L,Pourpe S,Liu C,Zappasodi R,Zamarin D,Cavanaugh J,Castro AC,Manfredi MG,McGovern K,Merghoub T,Wolchok JD</p>	<p>Year</p> <p>2020</p>

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