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Anti-Aryl hydrocarbon Receptor/Ahr Antibody Picoband™

Catalog Number: A00225-3

About Ahr

AHR (aryl hydrocarbon receptor), also called bHLHe76, is a member of the family of basic helix-loop-helix transcription factors. AhR is a cytosolic transcription factor that is normally inactive, bound to several co-chaperones. The AHR gene is mapped on 7p21.1. Estrogenic actions of AHR agonists were detected in wildtype ovariectomized mouse uteri, but were absent in Ahr -/- or Er-alpha -/- ovariectomized mice. Complex assembly and ubiquitin ligase activity of CUL4B (AHR) in vitro and in vivo are dependent on the AHR ligand. In the CUL4B (AHR) complex, ligand-activated AHR acts as a substrate-specific adaptor component that targets sex steroid receptors for degradation. Cd4-positive cells from mice lacking Ahr developed Th17 responses but failed to produce Il22 and did not show enhanced Th17 development. Activation of Ahr during induction of EAE accelerated disease onset and increased pathology in wildtype mice, but not in Ahr -/- mice. The TDO-AHR pathway is active in human brain tumors and is associated with malignant progression and poor survival. Ahr activity within ROR-gamma-t-positive ILC could be induced by dietary ligands such as those contained in vegetables of the family Brassicaceae.

Overview

Product Name	Anti-Aryl hydrocarbon Receptor/Ahr Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Aryl hydrocarbon Receptor/Ahr Antibody Picoband™ catalog # A00225-3. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P41738

Technical Details

Immunogen	E.coli-derived rat Aryl hydrocarbon Receptor/Ahr recombinant protein (Position: R15-Q196).
Predicted Reactive Species	Chicken
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.25-0.5ug/ml, Mouse, Rat Flow Cytometry, 1-3ug/1x10^6 cells, Rat Direct ELISA, 0.1-0.5ug/ml, Rat

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Anti-Aryl hydrocarbon Receptor/Ahr Antibody Picoband™ (A00225-3) Images

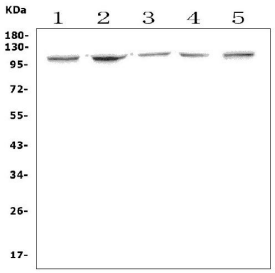

Figure 1. Western blot analysis of Ahr using anti-Ahr antibody (A00225-3).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat liver tissue lysates,
Lane 2: rat PC-12 whole cell lysates,
Lane 3: rat C6 whole cell lysates,
Lane 4: rat RH35 whole cell lysates,
Lane 5: mouse liver tissue lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Ahr antigen affinity purified polyclonal antibody (Catalog # A00225-3) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Ahr at approximately 110KD. The expected band size for Ahr is at 96KD.

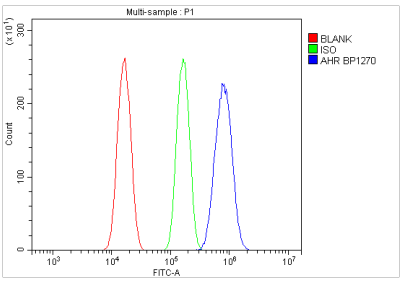

Figure 2. Flow Cytometry analysis of Neuro-2a cells using anti-Ahr antibody (A00225-3).
Overlay histogram showing Neuro-2a cells stained with A00225-3 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Ahr Antibody (A00225-3, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1 Publications Citing This Product

1. PubMed ID: 33204326, Yang X,Liu H,Ye T,Duan C,Lv P,Wu X,Liu J,Jiang K,Lu H,Yang H,Xia D,Peng E,Chen Z,Tang K,Ye Z. AhR activation attenuates calcium oxalate nephrocalcinosis by diminishing M1 macrophage polarization and promoting M2 macrophage polarization. Theranostics.2020

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