SANTA CRUZ BIOTECHNOLOGY, INC.

Ah Receptor (C-18): sc-8087

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is the prototype for a family of toxic halogenated aromatic compounds that are thought to cause adverse reproductive, immunologic and metabolic effects. Many biological responses to TCDD are mediated through ligand binding to the aromatic hydrocarbon receptor, AhR. AhR is a ligand dependent transcription factor that interacts with specific DNA sequences, termed xenobiotic responsive elements (XREs), and that lies upstream of TCDD-inducible genes. Upon binding to the ligand, AhR binds to the Ah-receptor nuclear translocator (Arnt), and the complex is translocated from the cytoplasm to the nucleus. Arnt is required for AhR to bind to XRE. AhR and Arnt are members of a family of transcription factors that contain a basic helix-loop-helix motif and a common "PAS" motif.

CHROMOSOMAL LOCATION

Genetic locus: AHR (human) mapping to 7p21.1.

SOURCE

Ah Receptor (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ah Receptor of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8087 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8087 X, 200 µg/0.1 ml.

APPLICATIONS

Ah Receptor (C-18) is recommended for detection of Ah Receptor of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ah Receptor siRNA (h): sc-29654, Ah Receptor shRNA Plasmid (h): sc-29654-SH and Ah Receptor shRNA (h) Lentiviral Particles: sc-29654-V.

Ah Receptor (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Ah Receptor: 96 kDa.

Molecular Weight (observed) of Ah Receptor: 122 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or PC-3 cell lysate: sc-2220.

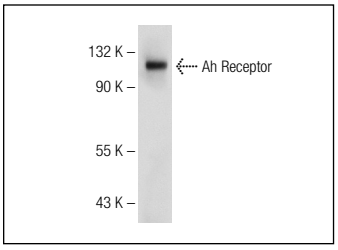
RESEARCH USE

For research use only, not for use in diagnostic procedures.

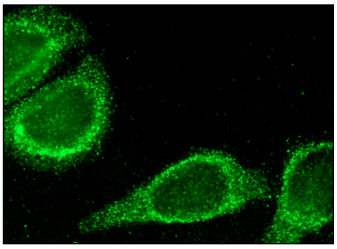
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Ah Receptor (C-18): sc-8087. Western blot analysis of Ah Receptor expression in PC-3 whole cell lysates.



Ah Receptor (C-18): sc-8087. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Fujimura, M., et al. 2001. Absence of estrogen receptor-α expression in human ovarian clear cell adenocarcinoma compared with ovarian serous, endometrioid, and mucinous adenocarcinoma. Am. J. Surg. Pathol. 25: 667-672.
2. Fukuda, I., et al. 2004. A new southwestern chemistry-based ELISA for detection of aryl hydrocarbon receptor transformation: application to the screening of its receptor agonists and antagonists. J. Immunol. Methods 287: 187-201.
3. Kalthoff, S., et al. 2010. Interaction between oxidative stress sensor Nrf2 and xenobiotic-activated aryl hydrocarbon receptor in the regulation of the human phase II detoxifying UDP-glucuronosyltransferase 1A10. J. Biol. Chem. 285: 5993-6002.
4. Kalthoff, S., et al. 2010. Coffee induces expression of glucuronosyltransferases by the aryl hydrocarbon receptor and Nrf2 in liver and stomach. Gastroenterology 139: 1699-1710, 1710.e1-1710.e2.
5. Stolpmann, K., et al. 2012. Activation of the aryl hydrocarbon receptor sensitises human keratinocytes for CD95L- and TRAIL-induced apoptosis. Cell Death Dis. 3: e388.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.