

# Ah Receptor (N-19): sc-8088

## 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; Ahr (mouse) mapping to 12 A3.

## SOURCE

Ah Receptor (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-8088 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-8088 X, 200 µg/0.1 ml.

## APPLICATIONS

Ah Receptor (N-19) is recommended for detection of Ah Receptor of mouse, rat, human and zebrafish 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ah Receptor (N-19) is also recommended for detection of Ah Receptor in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Ah Receptor siRNA (h): sc-29654, Ah Receptor siRNA (m): sc-29655, Ah Receptor shRNA Plasmid (h): sc-29654-SH, Ah Receptor shRNA Plasmid (m): sc-29655-SH, Ah Receptor shRNA (h) Lentiviral Particles: sc-29654-V and Ah Receptor shRNA (m) Lentiviral Particles: sc-29655-V.

Ah Receptor (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

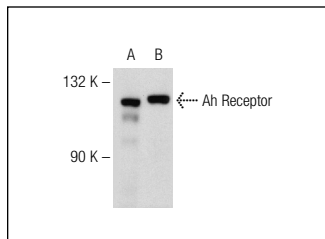
Molecular Weight (observed) of Ah Receptor: 122 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

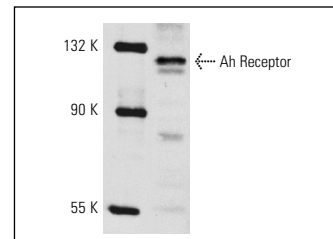
## STORAGE

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

## DATA



Ah Receptor (N-19): sc-8088. Western blot analysis of Ah Receptor expression in PC-3 (A) and NIH/3T3 (B) whole cell lysates.



Ah Receptor (N-19): sc-8088. Western blot analysis of Ah Receptor expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

- Kim, D.W., et al. 2000. The RelA NFκB subunit and the aryl hydrocarbon receptor (AhR) cooperate to transactivate the c-Myc promoter in mammary cells. *Oncogene* 19: 5498-5506.
- Wormke, M., et al. 2000. Crosstalk between estrogen receptor α and the aryl hydrocarbon receptor in breast cancer cells involves unidirectional activation of proteasomes. *FEBS Lett.* 478: 109-112.
- Kajta, M., et al. 2009. Aryl hydrocarbon receptor-mediated apoptosis of neuronal cells: a possible interaction with estrogen receptor signaling. *Neuroscience* 158: 811-822.
- Singhal, R., et al. 2009. Estrogenic status modulates the effect of soy on hepatic responses to 7,12-dimethylbenz(a)anthracene (DMBA). *Toxicol. Appl. Pharmacol.* 234: 89-97.
- Pakharukova, M., et al. 2010. The increased CAR-dependent metabolism of thyroid hormones in mice with high cancer susceptibility. *Life Sci.* 87: 439-444.
- Marconett, C.N., et al. 2010. Indole-3-carbinol triggers aryl hydrocarbon receptor-dependent estrogen receptor (ER)α protein degradation in breast cancer cells disrupting an ERα-GATA3 transcriptional cross-regulatory loop. *Mol. Biol. Cell* 21: 1166-1177.

## RESEARCH USE

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



Try **Ah Receptor (A-3): sc-133088** or **Ah Receptor (B-11): sc-74571**, our highly recommended monoclonal alternatives to Ah Receptor (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ah Receptor (A-3): sc-133088**.