

# Ah Receptor (M-20): sc-8089

## 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 (Ah) receptor, also known as AhR. Ah Receptor 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, Ah Receptor binds to the Ah Receptor nuclear translocator (Arnt), and the complex is translocated from the cytoplasm to the nucleus. Arnt is required for Ah Receptor to bind to XRE. Ah Receptor 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 (mouse) mapping to 12 A3.

## SOURCE

Ah Receptor (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ah Receptor of mouse 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-8089 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-8089 X, 200 µg/0.1 ml.

## APPLICATIONS

Ah Receptor (M-20) is recommended for detection of Ah Receptor of mouse and rat 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 (m): sc-29655, Ah Receptor shRNA Plasmid (m): sc-29655-SH and Ah Receptor shRNA (m) Lentiviral Particles: sc-29655-V.

Ah Receptor (M-20) 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: NIH/3T3 whole cell lysate: sc-2210 or c4 whole cell lysate: sc-364186.

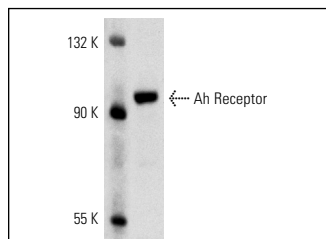
## RESEARCH USE

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 (M-20): sc-8089. Western blot analysis of Ah Receptor expression in c4 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. 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.
2. Watanabe, H., et al. 2004. Comparative uterine gene expression analysis after dioxin and estradiol administration. *J. Mol. Endocrinol.* 33: 763-771.
3. Kinehara, M., et al. 2008. High-throughput evaluation of aryl hydrocarbon receptor-binding sites selected via chromatin immunoprecipitation-based screening in Hepa-1c1c7 cells stimulated with 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Genes Genet. Syst.* 83: 455-468.
4. Abdull Razis, A.F., et al. 2012. The naturally occurring aliphatic isothiocyanates sulforaphane and erucin are weak agonists but potent non-competitive antagonists of the aryl hydrocarbon receptor. *Arch. Toxicol.* 86: 1505-1514.
5. Abdull Razis, A.F., et al. 2012. Phenethyl isothiocyanate, a naturally occurring phytochemical, is an antagonist of the aryl hydrocarbon receptor. *Mol. Nutr. Food Res.* 56: 425-434.
6. Zhang, H.F., et al. 2012. Regulation of the activity and expression of aryl hydrocarbon receptor by ethanol in mouse hepatic stellate cells. *Alcohol. Clin. Exp. Res.* 36: 1873-1881.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **Ah Receptor (A-3): sc-133088** or **Ah Receptor (B-11): sc-74571**, our highly recommended monoclonal alternatives to Ah Receptor (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Ah Receptor (A-3): sc-133088**.