SANTA CRUZ BIOTECHNOLOGY, INC.

Arnt 2 (M-20): sc-8078

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AhR, Arnt 1, Arnt 2 and BMAL1 are members of a family of transcription factors that contain a basic helix-loop-helix motif and a common "PAS" motif. The aromatic (aryl) hydrocarbon receptor, AhR, is a ligand dependent transcription factor that interacts with specific DNA sequences termed xenobiotic responsive elements (XREs) to activate several genes including CYP1A1, glutathione S-transferase Ya subunit and DT-diaphorase. The Ah receptor nuclear translocator proteins (Arnt 1 or Arnt 2) are required for ligand-dependent nuclear translocation of the Ah receptor and are also necessary for Ah receptor binding to the XRE element. BMAL1 (Brain and Muscle Arnt-Like protein 1), also designated Arnt3, TIC, JAP3 or MOP3, has been shown to dimerize with Clock and bind to the promoter region of mPer1, suggesting that this protein plays a role in regulation of circadian oscillation in mammals.

CHROMOSOMAL LOCATION

Genetic locus: ARNT2 (human) mapping to 15q25.1; Arnt2 (mouse) mapping to 7 D3.

SOURCE

Arnt 2 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Arnt 2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8078 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8078 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Arnt 2 (M-20) is recommended for detection of Arnt 2 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), 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); may cross-react with Arnt 1.

Arnt 2 (M-20) is also recommended for detection of Arnt 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Arnt 2 siRNA (h): sc-29735, Arnt 2 siRNA (m): sc-29736, Arnt 2 shRNA Plasmid (h): sc-29735-SH, Arnt 2 shRNA Plasmid (m): sc-29736-SH, Arnt 2 shRNA (h) Lentiviral Particles: sc-29735-V and Arnt 2 shRNA (m) Lentiviral Particles: sc-29736-V.

Arnt 2 (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

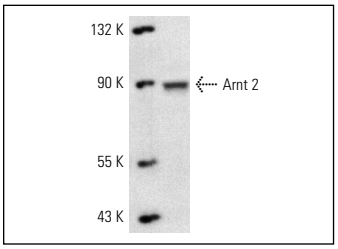
Molecular Weight of Arnt 2: 90 kDa.

Positive Controls: mouse brain extract: sc-2253, WEHI-231 whole cell lysate: sc-2213 or WEHI-3 cell lysate: sc-3815.

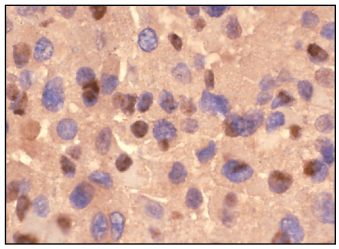
STORAGE

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

DATA



Arnt 2 (M-20): sc-8078. Western blot analysis of Arnt 2 expression in WEHI-231 whole cell lysate.



Arnt 2 (M-20): sc-8078. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tumor showing nuclear localization.

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. Prasch, A.L., et al. 2004. Arnt 2 is not required for TCDD developmental toxicity in zebrafish. Toxicol. Sci. 82: 250-258.

RESEARCH USE

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

PROTOCOLS

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