

# Arnt 1 (N-19): sc-8077

## 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. Arnt 1 (aryl hydrocarbon receptor nuclear translocator), also known as HIF1B, TANGO, bHLHe2, HIF1BETA, HIF-1 $\beta$  or ARNT, is a 789 amino acid nuclear protein that contains a basic helix-loop-helix (bHLH) domain, a PAC (PAS-associated C-terminal) domain and two PAS (PER-ARNT-SIM) domains.

## CHROMOSOMAL LOCATION

Genetic locus: ARNT (human) mapping to 1q21.3; Arnt (mouse) mapping to 3 F2.1.

## SOURCE

Arnt 1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Arnt 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8077 P, (100  $\mu$ g 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-8077 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

Arnt 1 (N-19) is recommended for detection of Arnt 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Arnt 1 (N-19) is also recommended for detection of Arnt 1 in additional species, including canine and bovine.

Suitable for use as control antibody for Arnt 1 siRNA (h): sc-29733, Arnt 1 siRNA (m): sc-29734, Arnt 1 siRNA (r): sc-156041, Arnt 1 shRNA Plasmid (h): sc-29733-SH, Arnt 1 shRNA Plasmid (m): sc-29734-SH, Arnt 1 shRNA Plasmid (r): sc-156041-SH, Arnt 1 shRNA (h) Lentiviral Particles: sc-29733-V, Arnt 1 shRNA (m) Lentiviral Particles: sc-29734-V and Arnt 1 shRNA (r) Lentiviral Particles: sc-156041-V.

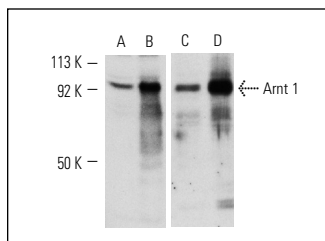
Arnt 1 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Arnt 1: 95 kDa.

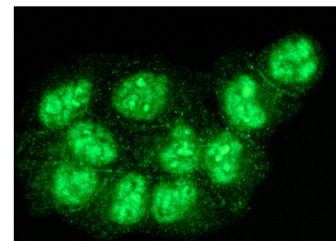
## STORAGE

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

## DATA



Western blot analysis of Arnt 1 expression in untreated (A, C) and  $\text{CoCl}_2$  treated HeLa (B, D) whole cell lysates. Antibodies tested include Arnt 1 (N-19): sc-8077 (A, B) and Arnt 1 (H-172): sc-5580 (C, D).



Arnt 1 (N-19): sc-8077. Immunofluorescence staining of methanol-fixed,  $\text{CoCl}_2$  treated HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Cheng, L.L., et al. 2005. Identification of an E-box motif as a transcriptional repressor element in the proximal promoter region of the GCLC gene in rat lung Epithelial L2 cells. *Free Radic. Biol. Med.* 39: 1030-1040.
- Sikder, D., et al. 2007. The neurohormone Orexin stimulates hypoxia-inducible factor-1 activity. *Genes Dev.* 21: 2995-3005.
- Li, Y., et al. 2010. The aryl hydrocarbon receptor nuclear translocator-interacting protein 2 suppresses the estrogen receptor signaling via an Arnt-dependent mechanism. *Arch. Biochem. Biophys.* 502: 121-129.
- Maroni, P., et al. 2011. Nuclear co-localization and functional interaction of COX-2 and HIF-1 $\alpha$  characterize bone metastasis of human breast carcinoma. *Breast Cancer Res. Treat.* 129: 433-450.

## RESEARCH USE

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

## PROTOCOLS

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



Try **Arnt 1 (A-3): sc-17811** or **Arnt 1 (H-10): sc-55526**, our highly recommended monoclonal alternatives to Arnt 1 (N-19).