

Arnt 1 (C-19): sc-8076

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 β 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 2 PAS (PER-ARNT-SIM) domains.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-8076 P, (100 μ 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-8076 X, 200 μ g/0.1 ml.

APPLICATIONS

Arnt 1 (C-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 μ g per 100-500 μ g 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 2.

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

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

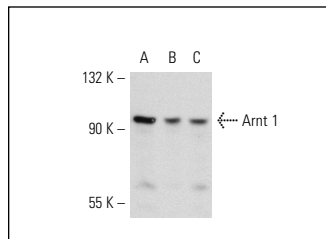
Molecular Weight of Arnt 1: 95 kDa.

Positive Controls: RAW 264.7 nuclear extract: sc-24961, K-562 nuclear extract: sc-2130 or NIH/3T3 nuclear extract: sc-2138.

STORAGE

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

DATA



Arnt 1 (C-19): sc-8076. Western blot analysis of Arnt 1 expression in NIH/3T3 (A), RAW 264.7 (B) and MM-142 (C) nuclear extracts.

SELECT PRODUCT CITATIONS

1. 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.
2. Roman, A.C., et al. 2008. Genome-wide B1 retrotransposon binds the transcription factors dioxin receptor and Slug and regulates gene expression *in vivo*. *Proc. Natl. Acad. Sci. USA* 105: 1632-1637.
3. Zehetner, J., et al. 2008. PVHL is a regulator of glucose metabolism and Insulin secretion in pancreatic β cells. *Genes Dev.* 22: 3135-3146.
4. Ooe, N., et al. 2009. Characterization of functional heterodimer partners in brain for a bHLH-PAS factor NXF. *Biochim. Biophys. Acta* 1789: 192-197.
5. Mukai, R., et al. 2009. Inhibition of P-glycoprotein enhances the suppressive effect of kaempferol on transformation of the aryl hydrocarbon receptor. *Biosci. Biotechnol. Biochem.* 73: 1635-1639.
6. Fu, J., et al. 2011. Regulation of estrogen sulfotransferase expression by confluence of MCF10A breast epithelial cells: role of the aryl hydrocarbon receptor. *J. Pharmacol. Exp. Ther.* 339: 597-606.
7. Weir, L., et al. 2011. Hypoxia-mediated control of HIF/ARNT machinery in epidermal keratinocytes. *Biochim. Biophys. Acta* 1813: 60-72.

RESEARCH USE

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

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