

BMAL1 (N-20): sc-8550

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: ARNTL (human) mapping to 11p15.2; Arntl (mouse) mapping to 7 F1.

SOURCE

BMAL1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of BMAL1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8550 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8550 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMAL1 (N-20) is recommended for detection of BMAL1 of mouse, rat and human 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).

BMAL1 (N-20) is also recommended for detection of BMAL1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BMAL1 siRNA (h): sc-38165, BMAL1 siRNA (m): sc-38166, BMAL1 shRNA Plasmid (h): sc-38165-SH, BMAL1 shRNA Plasmid (m): sc-38166-SH, BMAL1 shRNA (h) Lentiviral Particles: sc-38165-V and BMAL1 shRNA (m) Lentiviral Particles: sc-38166-V.

BMAL1 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of BMAL1: 69 kDa.

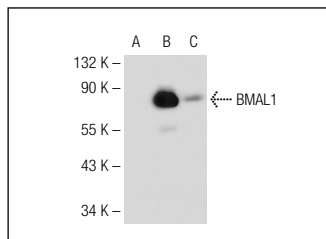
Molecular Weight (observed) of BMAL1: 75-86 kDa.

Positive Controls: BMAL1 (m): 293T Lysate: sc-126508, 3T3-L1 cell lysate: sc-2243 or BMAL1 (h2): 293T Lysate: sc-115751.

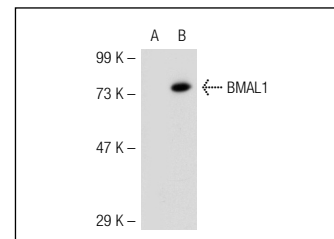
STORAGE

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

DATA



BMAL1 (N-20): sc-8550. Western blot analysis of BMAL1 expression in non-transfected 293T: sc-117752 (A), human BMAL1 transfected 293T: sc-115751 (B) and 3T3-L1 (C) whole cell lysates.



BMAL1 (N-20): sc-8550. Western blot analysis of BMAL1 expression in non-transfected: sc-117752 (A) and mouse BMAL1 transfected: sc-126508 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Munoz, E., et al. 2002. Circadian transcription. Thinking outside the E-Box. J. Biol. Chem. 277: 36009-36017.
- Amano, T., et al. 2009. Expression and functional analyses of circadian genes in mouse oocytes and preimplantation embryos: Cry1 is involved in the meiotic process independently of circadian clock regulation. Biol. Reprod. 80: 473-483.
- Ward, S.M., et al. 2010. The transcriptional repressor ID2 can interact with the canonical clock components CLOCK and BMAL1 and mediate inhibitory effects on mPer1 expression. J. Biol. Chem. 285: 38987-39000.
- Bose, S., et al. 2010. Episodes of prolactin gene expression in GH3 cells are dependent on selective promoter binding of multiple circadian elements. Endocrinology 151: 2287-2296.

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.



Try **BMAL1 (B-1): sc-365645** or **BMAL1 (A-6): sc-373955**, our highly recommended monoclonal alternatives to BMAL1 (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **BMAL1 (B-1): sc-365645**.