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SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

BMAL1 (h2): 293T Lysate: sc-115751

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.

REFERENCES

1. Reyes, H., et al. 1992. Identification of the Ah receptor nuclear translocator protein (Arnt) as a component of the DNA binding form of the Ah receptor. *Science* 256: 1193-1195.
2. Sogawa, K., et al. 1995. Transcriptional activation domains of the Ah receptor and Ah receptor nuclear translocator. *J. Cancer Res. Clin. Oncol.* 121: 612-620.
3. Drutel, G., et al. 1996. Cloning and selective expression in brain and kidney of Arnt 2 homologous to the Ah receptor nuclear translocator (Arnt). *Biochem. Biophys. Res. Commun.* 225: 333-339.
4. Hirose, K., et al. 1996. cDNA cloning and tissue-specific expression of a novel basic helix-loop-helix/PAS factor (Arnt 2) with close sequence similarity to the aryl hydrocarbon receptor nuclear translocator (Arnt). *Mol. Cell. Biol.* 16: 1706-1713.
5. Ikeda, M., et al. 1997. cDNA cloning and tissue-specific expression of a novel basic helix-loop-helix/PAS protein (BMAL1) and identification of alternatively spliced variants with alternative translation initiation site usage. *Biochem. Biophys. Res. Commun.* 233: 258-264.
6. Sogawa, K., et al. 1997. Ah receptor, a novel ligand-activated transcription factor. *J. Biochem.* 122: 1075-1079.
7. Honma, S., et al. 1998. Circadian oscillation of BMAL1, a partner of a mammalian clock gene Clock, in rat suprachiasmatic nucleus. *Biochem. Biophys. Res. Commun.* 250: 83-87.

CHROMOSOMAL LOCATION

Genetic locus: ARNTL (human) mapping to 11p15.2.

PRODUCT

BMAL1 (h2): 293T Lysate represents a lysate of human BMAL1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

BMAL1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive BMAL1 antibodies. Recommended use: 10-20 µl per lane.

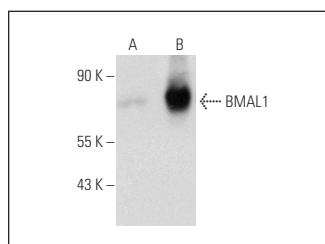
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

BMAL1 (B-1): sc-365645 is recommended as a positive control antibody for Western Blot analysis of enhanced human BMAL1 expression in BMAL1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

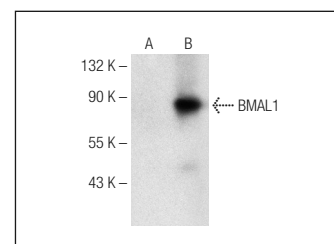
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



BMAL1 (B-1): sc-365645. Western blot analysis of BMAL1 expression in non-transfected: sc-117752 (A) and human BMAL1 transfected: sc-115751 (B) 293T whole cell lysates.



BMAL1 (A-6): sc-373955. Western blot analysis of BMAL1 expression in non-transfected: sc-117752 (A) and human BMAL1 transfected: sc-115751 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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