

Timeless (A-17): sc-12374

BACKGROUND

Biological timepieces called circadian clocks are responsible for the regulation of hormonal rhythms, sleep cycles and other behaviors. The suprachiasmatic nucleus (SCN), which is located in the brain, was the first mammalian circadian clock to be discovered. A number of transcription factors appearing to be molecular components of the SCN clock have been identified. Mutations within the Clock gene increase the length of the endogenous period and cause a loss of rhythmicity of circadian oscillations. Three mammalian period proteins, designated Per1, Per2 and Per3, exhibit circadian rhythms in the SCN. During subjective night, Per1 and Per2 RNA levels increase in response to light pulses, while Per3 RNA levels show no change in response to light pulses. Timeless interacts with Per1 as well as Per2. Timeless and Per1 negatively regulate Clock-BMAL1-induced transcription.

REFERENCES

- Morell, V. 1995. A 24-hour circadian clock is found in the mammalian retina. *Science* 272: 349.
- King, D.P., et al. 1997. The mouse Clock mutation behaves as an anti-morph and maps within the W19H deletion, distal of Kit. *Genetics* 146: 1049-1060.
- Antoch, M.P., et al. 1997. Functional identification of the mouse circadian Clock gene by transgenic BAC rescue. *Cell* 89: 655-667.
- Zylka, M.J., et al. 1998. Three period homologs in mammals: differential light responses in the suprachiasmatic circadian clock and oscillating transcripts outside of brain. *Neuron* 20: 1103-1110.
- Sangoram, A.M., et al. 1998. Mammalian circadian autoregulatory loop: a Timeless ortholog and mPer1 interact and negatively regulate Clock-BMAL1-induced transcription. *Neuron* 21: 1101-1113.

CHROMOSOMAL LOCATION

Genetic locus: TIMELESS (human) mapping to 12q13.3; Timeless (mouse) mapping to 10 D3.

SOURCE

Timeless (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Timeless 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.

Blocking peptide available for competition studies, sc-12374 P, (100 µg 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-12374 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

Timeless (A-17) is recommended for detection of Timeless of 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), 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).

Suitable for use as control antibody for Timeless siRNA (h): sc-72016, Timeless shRNA Plasmid (h): sc-72016-SH and Timeless shRNA (h) Lentiviral Particles: sc-72016-V.

Timeless (A-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

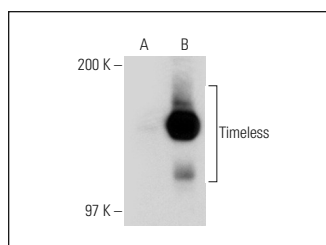
Molecular Weight of Timeless: 180 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or Timeless (h): 293T Lysate: sc-116208.

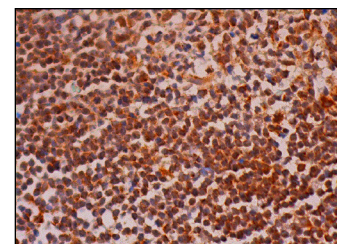
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Timeless (A-17): sc-12374. Western blot analysis of Timeless expression in non-transfected: sc-117752 (A) and human Timeless transfected: sc-116208 (B) 293T whole cell lysates.



Timeless (A-17): sc-12374. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in germinal center and cells in non-germinal center.

RESEARCH USE

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