



Per2 (h): 293T Lysate: sc-129449

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. Tim, for timeless, interacts with Per1 as well as Per2; and Tim and Per1 negatively regulate Clock-BMAL1-induced transcription.

REFERENCES

1. Morell, V. 1995. A 24-hour circadian clock is found in the mammalian retina. *Science* 272: 349.
2. 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.
3. Antoch, M.P., et al. 1997. Functional identification of the mouse circadian Clock gene by transgenic BAC rescue. *Cell* 89: 655-667.
4. 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.
5. 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: PER2 (human) mapping to 2q37.3.

PRODUCT

Per2 (h): 293T Lysate represents a lysate of human Per2 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.

PROTOCOLS

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

APPLICATIONS

Per2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Per2 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.

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.

RESEARCH USE

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