

MEL-1B-R (H-18): sc-13174

BACKGROUND

The melatonin receptors, MEL-1A-R and MEL-1B-R, are members of the superfamily of guanine nucleotide-binding regulatory protein G protein-coupled receptors. The melatonin receptors are activated by the hormone melatonin (Mel), which is secreted by the pineal gland at night as part of the circadian clock. MEL-1A-R is thought to be involved in pacing the biological clock. Both MEL-1A-R and MEL-1B-R are implicated in controlling cellular growth in response to melatonin. MEL-1B-R is an integral membrane protein expressed in retina and, to a lesser extent, in brain and hippocampus. Functional studies of NIH/3T3 cells stably expressing the MEL-1B-R melatonin receptor indicate that it is coupled to inhibition of adenylyl cyclase.

REFERENCES

1. Reppert, S.M., et al. 1995. Molecular characterization of a second melatonin receptor expressed in human retina and brain: the Mel1 β melatonin receptor. *Proc. Natl. Acad. Sci. USA* 92: 8734-8738.
2. Reppert, S.M., et al. 1996. Cloning of a melatonin-related receptor from human pituitary. *FEBS Lett.* 386: 219-224.
3. Brzezinski, A. 1997. Melatonin in humans. *N. Engl. J. Med.* 336: 186-195.
4. Niles, L.P., et al. 1999. Melatonin receptor mRNA expression in human granulosa cells. *Mol. Cell. Endocrinol.* 156: 107-110.

CHROMOSOMAL LOCATION

Genetic locus: MTNR1B (human) mapping to 11q14.3.

SOURCE

MEL-1B-R (H-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MEL-1B-R 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-13174 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEL-1B-R (H-18) is recommended for detection of MEL-1B-R of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MEL-1B-R siRNA (h): sc-40114, MEL-1B-R shRNA Plasmid (h): sc-40114-SH and MEL-1B-R shRNA (h) Lentiviral Particles: sc-40114-V.

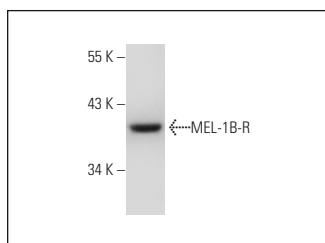
Molecular Weight of MEL-1B-R: 36 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177.

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.

DATA



MEL-1B-R (H-18): sc-13174. Western blot analysis of MEL-1B-R expression in COLO 205 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lanoix, D., et al. 2008. Human placental trophoblasts synthesize melatonin and express its receptors. *J. Pineal Res.* 45: 50-60.
2. Tam, C.W., et al. 2008. Melatonin as a negative mitogenic hormonal regulator of human prostate epithelial cell growth: potential mechanisms and clinical significance. *J. Pineal Res.* 45: 403-412.
3. Shiu, S.Y., et al. 2010. Signal transduction of receptor-mediated antiproliferative action of melatonin on human prostate epithelial cells involves dual activation of G $_{\alpha s}$ and G $_{\alpha q}$ proteins. *J. Pineal Res.* 49: 301-311.

STORAGE

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

RESEARCH USE

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



Try **MEL-1A/B-R (B-8): sc-398788**, our highly recommended monoclonal alternative to MEL-1B-R (H-18).