SANTA CRUZ BIOTECHNOLOGY, INC.

CRY2 (181J2J): sc-517631

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Circadian clocks are biological timepieces that regulate hormonal rhythms, sleep cycles and feeding behaviors. These rhythms are generated in the suprachiasmatic nucleus (SCN), a cell-autonomous circadian oscillator located within the brain that is synchronized with the environment by light. A number of transcription factors, including Clock and BMAL1, are molecular components of the SCN that induce the expression of proteins involved in light/dark cycle entrainment, which include Per1 and Per2. Tim, for timeless, generates a negative feedback loop that regulates the activity of Clock by suppressing the expression of Clock target genes. Tim forms heterodimers with Per1 and Per2 that bind Clock and block the activation of Clock-BMAL1 dimers to repress Per gene expression. Additionally, the CRY proteins, which are cryptochrome photoreceptors for the circadian clock, function as light-independent inhibitors of the circadian clock. CRY1 and CRY2 negatively regulate SCN components by associating with the activators Clock-BMAL1, and also with the various feedback inhibitors Per1, Per2 and Tim.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CRY2 (human) mapping to 11p11.2; Cry2 (mouse) mapping to 2 E1.

RESEARCH USE

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

SOURCE

CRY2 (181J2J) is a mouse monoclonal antibody raised against recombinant CRY2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CRY2 (181J2J) is recommended for detection of CRY2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for CRY2 siRNA (h): sc-43707, CRY2 siRNA (m): sc-44836, CRY2 shRNA Plasmid (h): sc-43707-SH, CRY2 shRNA Plasmid (m): sc-44836-SH, CRY2 shRNA (h) Lentiviral Particles: sc-43707-V and CRY2 shRNA (m) Lentiviral Particles: sc-44836-V.

Molecular Weight of CRY2: 67 kDa.

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.

STORAGE

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

PROTOCOLS

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