

# CRY1 (H-84): sc-33177

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CRY1 (human) mapping to 12q23.3; Cry1 (mouse) mapping to 10 C1.

## SOURCE

CRY1 (H-84) is a rabbit polyclonal antibody raised against amino acids 503-586 mapping at the C-terminus of CRY1 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.

## APPLICATIONS

CRY1 (H-84) is recommended for detection of CRY1 of mouse, rat and 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).

CRY1 (H-84) is also recommended for detection of CRY1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CRY1 siRNA (h): sc-43706, CRY1 siRNA (m): sc-44835, CRY1 siRNA (r): sc-108035, CRY1 shRNA Plasmid (h): sc-43706-SH, CRY1 shRNA Plasmid (m): sc-44835-SH, CRY1 shRNA Plasmid (r): sc-108035-SH, CRY1 shRNA (h) Lentiviral Particles: sc-43706-V, CRY1 shRNA (m) Lentiviral Particles: sc-44835-V, and CRY1 shRNA (r) Lentiviral Particles: sc-108035-V.

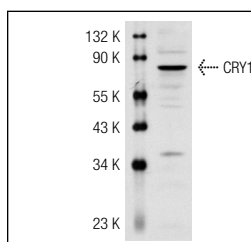
Molecular Weight of CRY1: 66 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

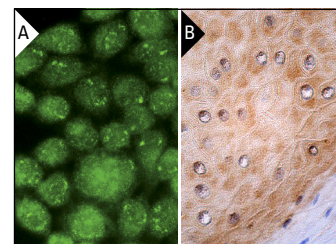
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



CRY1 (H-84): sc-33177. Western blot analysis of CRY1 expression in HeLa whole cell lysate.



CRY1 (H-84): sc-33177. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (B).

## SELECT PRODUCT CITATIONS

1. Tong, X., et al. 2012. USP2a protein deubiquitinates and stabilizes the circadian protein CRY1 in response to inflammatory signals. *J. Biol. Chem.* 287: 25280-25291.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **CRY1 (H-12): sc-393466** or **CRY1 (W-L5): sc-101006**, our highly recommended monoclonal alternatives to CRY1 (H-84).