

# Rootletin (H-84): sc-135275

## BACKGROUND

Rootletin, also known as CROCC (ciliary rootlet coiled-coil protein), is a 2,017 amino acid protein that forms centriole-associated fibrous structures and is an essential component of the ciliary rootlet. Localized to basal bodies and centrosomes in ciliated and nonciliated cells, respectively, Rootletin associates with the proximal ends of basal bodies and, in photoreceptors, functions to form elongated polymers between them. Rootletin is required for centrosome cohesion and, through interaction with C-Nap1 (a centrosomal protein present at the ends of the centrioles), can regulate the linkage of centrioles to basal bodies. Rootletin exists as a homopolymer whose association with centrosomes can be regulated via phosphorylation by Nek2 (NIMA-related kinase 2). Two isoforms exist due to alternative splicing events.

## REFERENCES

1. Yang, J., et al. 2002. Rootletin, a novel coiled-coil protein, is a structural component of the ciliary rootlet. *J. Cell Biol.* 159: 431-440.
2. Yang, J., et al. 2005. The ciliary rootlet maintains long-term stability of sensory cilia. *Mol. Cell. Biol.* 25: 4129-4137.

## CHROMOSOMAL LOCATION

Genetic locus: CROCC (human) mapping to 1p36.13; Crocc (mouse) mapping to 4 D3.

## SOURCE

Rootletin (H-84) is a rabbit polyclonal antibody raised against amino acids 1207-1290 mapping within an internal region of Rootletin 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

Rootletin (H-84) is recommended for detection of Rootletin 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).

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

Suitable for use as control antibody for Rootletin siRNA (h): sc-62960, Rootletin siRNA (m): sc-62961, Rootletin shRNA Plasmid (h): sc-62960-SH, Rootletin shRNA Plasmid (m): sc-62961-SH, Rootletin shRNA (h) Lentiviral Particles: sc-62960-V and Rootletin shRNA (m) Lentiviral Particles: sc-62961-V.

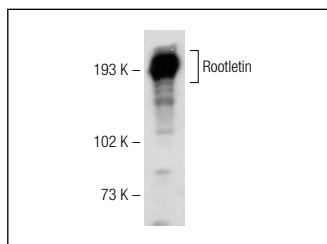
Molecular Weight of Rootletin: 228 kDa.

Positive Controls: Y79 nuclear extract: sc-2126.

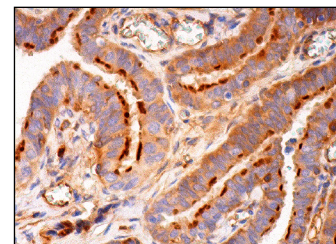
## RECOMMENDED SECONDARY REAGENTS

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



Rootletin (H-84): sc-135275. Western blot analysis of Rootletin expression in Y79 nuclear extract.



Rootletin (H-84): sc-135275. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of ciliated cells.

## 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 **Rootletin (C-2): sc-374056** or **Rootletin (E-5): sc-390720**, our highly recommended monoclonal alternatives to Rootletin (H-84).