

Rent1 (G-17): sc-18258

BACKGROUND

In eukaryotes, it is essential to have the ability to detect and degrade transcripts that lack full coding potential. Nonsense-mediated RNA decay (NMD) protects the organism by avoiding the translation of truncated peptides with dominant negative or deleterious gain-of-function potential. Rent1, a mammalian ortholog of Upf1p, is essential for embryonic viability. Rent1 (also designated regulator of nonsense transcripts and HUf1) contains an N-terminal zinc finger-like domain, NTPase domains and a region comprised of domains that define Rent1 as a superfamily group I helicase. Rent1 protein has nucleic acid-dependent ATPase activity and 5' to 3' helicase activity. In addition, Rent1 is an RNA-binding protein whose activity is modulated by ATP and directly interacts with Rent2, which is a mammalian homolog of Upf2p. Two mammalian orthologs to Upf3p, Rent3a and Rent3b, are encoded by two separate genes. Rent3b (also known as Rent3X) is encoded by an X-linked gene and localizes primarily to the nucleus, while Rent 1 and Rent 2 localize primarily in the cytoplasm. Specific Rent3 protein interactions with Y14 and spliced mRNA suggest Rent3a and Rent3b serve as a link between splicing and NMD in the cytoplasm.

CHROMOSOMAL LOCATION

Genetic locus: UPF1 (human) mapping to 19p13.11; Upf1 (mouse) mapping to 8 B3.3.

SOURCE

Rent1 (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rent1 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.

Blocking peptide available for competition studies, sc-18258 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rent1 (G-17) is recommended for detection of Rent1 of mouse, rat, human and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rent1 (G-17) is also recommended for detection of Rent1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Rent1 siRNA (h): sc-38223, Rent1 siRNA (m): sc-38224, Rent1 shRNA Plasmid (h): sc-38223-SH, Rent1 shRNA Plasmid (m): sc-38224-SH, Rent1 shRNA (h) Lentiviral Particles: sc-38223-V and Rent1 shRNA (m) Lentiviral Particles: sc-38224-V.

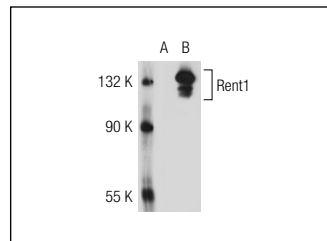
Molecular Weight of Rent1: 130 kDa.

Positive Controls: Rent1 (h): 293T lysate: sc-115858, Sol8 cell lysate: sc-2249 or SK-N-SH cell lysate: sc-2410.

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



Rent1 (G-17): sc-18258. Western blot analysis of Rent1 expression in non-transfected: sc-117752 (A) and human Rent1 transfected: sc-115858 (B) 293T whole cell lysates.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Rent1 (C-6): sc-393594** or **Rent1 (E-8): sc-166091**, our highly recommended monoclonal alternatives to Rent1 (G-17).