



Rent3 (K-16): sc-20232

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 HUpf1) 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: UPF3B (human) mapping to Xq25-q26; Upf3b (mouse) mapping to X A2.

SOURCE

Rent3 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rent3b 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-20232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rent3 (K-16) is recommended for detection of Rent3a and Rent3b of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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) 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.

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.