SANTA CRUZ BIOTECHNOLOGY, INC.

# Rer1 (C-15): sc-248398

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*The Power to Question*

## BACKGROUND

Rer1 (RER1 retention in endoplasmic reticulum 1), also known as RP4-740C4.2, is a 196 amino acid multi-pass membrane protein that localizes to the Golgi apparatus. Rer1 is involved in the retrieval of endoplasmic reticulum membrane proteins from the early Golgi compartment. Rer1 acts as a PEN-2-binding protein that plays a role as an auxiliary factor for γ-secretase complex assembly. Rer1 is encoded by a gene located on human chromsome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES


1. Füllekrug, J., et al. 1997. Human Rer1 is localized to the Golgi apparatus and complements the deletion of the homologous Rer1 protein of *Saccharomyces cerevisiae*. Eur. J. Cell Biol. 74: 31-40.
2. Sato, K., et al. 1999. The *Arabidopsis thaliana* RER1 gene family: its potential role in the endoplasmic reticulum localization of membrane proteins. Plant Mol. Biol. 41: 815-824.
3. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders—cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. Am. J. Hum. Genet. 69: 428-433.
4. Sato, K., et al. 2001. Rer1p, a retrieval receptor for endoplasmic reticulum membrane proteins, is dynamically localized to the Golgi apparatus by coatomer. J. Cell Biol. 152: 935-944.
5. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
6. Kaether, C., et al. 2006. Assembly, trafficking and function of γ-secretase. Neurodegener. Dis. 3: 275-283.
7. Kaether, C., et al. 2007. Endoplasmic reticulum retention of the γ-secretase complex component Pen2 by Rer1. EMBO Rep. 8: 743-748.


## CHROMOSOMAL LOCATION

Genetic locus: RER1 (human) mapping to 1p36.32; Rer1 (mouse) mapping to 4 E2.

## SOURCE

Rer1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rer1 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-248398 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rer1 (C-15) is recommended for detection of Rer1 of mouse, rat and 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).

Rer1 (C-15) is also recommended for detection of Rer1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rer1 siRNA (h): sc-78936, Rer1 siRNA (m): sc-152808, Rer1 shRNA Plasmid (h): sc-78936-SH, Rer1 shRNA Plasmid (m): sc-152808-SH, Rer1 shRNA (h) Lentiviral Particles: sc-78936-V and Rer1 shRNA (m) Lentiviral Particles: sc-152808-V.

Molecular Weight of Rer1: 23 kDa.

## 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.