SANTA CRUZ BIOTECHNOLOGY, INC.

# PRR20E (C-16): sc-84164

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Comprising nearly 4% of human DNA, chromosome 13 contains around 114 million base pairs and 400 genes. Key tumor suppressor genes on chromosome 13 include the breast cancer susceptibility gene, BRCA2, and the RB1 (retinoblastoma) gene. RB1 encodes a crucial tumor suppressor protein which, when defective, leads to malignant growth in the retina and has been implicated in a variety of other cancers. The gene SLITRK1, which is associated with Tourette syndrome, is on chromosome 13. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is quite deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections. The PRR20E gene product has been provisionally designated PRR20E pending further characterization.

## REFERENCES


1. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
2. Deng, H., et al. 2006. Examination of the SLITRK1 gene in Caucasian patients with Tourette syndrome. Acta Neurol. Scand. 114: 400-402.
3. Giacinti, C., et al. 2006. RB and cell cycle progression. Oncogene 25: 5220-5227.
4. Grados, M.A., et al. 2006. A new gene for Tourette's syndrome: a window into causal mechanisms? Trends Genet. 22: 291-293.
5. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
6. Hassler, M., et al. 2007. Crystal structure of the retinoblastoma protein N domain provides insight into tumor suppression, ligand interaction and holoprotein architecture. Mol. Cell 28: 371-385.
7. Hsu, H.F., et al. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. Am. J. Med. Genet. 143: 1739-1748.
8. Hall, H.E., et al. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143: 2242-2248.
9. Thorslund, T., et al. 2007. BRCA2: a universal recombinase regulator. Oncogene 26: 7720-7730.


## CHROMOSOMAL LOCATION

Genetic locus: PRR20E/PRR20B/PRR20C/PRR20D (human) mapping to 13q21.1.

## SOURCE

PRR20E (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PRR20E of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84164 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PRR20E (C-16) is recommended for detection of PRR20E, PRR20B, PRR20C and PRR20D 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).

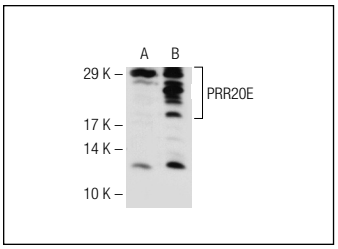
Molecular Weight of PRR20E: 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

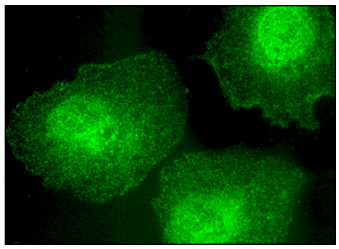
## RECOMMENDED SECONDARY REAGENTS

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) 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.

## DATA




PRR20E (C-16): sc-84164. Western blot analysis of PRR20E expression in Hep G2 (**A**) and HEK293 (**B**) whole cell lysates.



PRR20E (C-16): sc-84164. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

## 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.