# SANTA CRUZ BIOTECHNOLOGY, INC.

# RmlB (I-16): sc-84587



# BACKGROUND

RmIB, also known as TGDS (TDP-glucose 4,6-dehydratase), TDPGD or SDR2E1, is a 350 amino acid protein belonging to the dTDP-glucose dehydratase subfamily of the sugar epimerase family. RmIB utilizes NAD as a cofactor and is encoded by a gene located on human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. 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 deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

# REFERENCES

- Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
- Deng, H., et al. 2006. Examination of the SLITRK1 gene in Caucasian patients with Tourette syndrome. Acta Neurol. Scand. 114: 400-402.
- Giacinti, C. and Giordano, A. 2006. RB and cell cycle progression. Oncogene 25: 5220-5227.
- Takahashi, H., et al. 2006. A two-stage one-pot enzymatic synthesis of TDP-L-mycarose from thymidine and glucose-1-phosphate. J. Am. Chem. Soc. 128: 1432-1433.
- Grados, M.A. and Walkup, J.T. 2006. A new gene for Tourette's syndrome: a window into causal mechanisms? Trends Genet. 22: 291-293.
- Bugge, M., et al. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
- Pageni, B.B., et al. 2008. Genetically engineered biosynthesis of macrolide derivatives including 4-amino-4,6-dideoxy-L-glucose from *Streptomyces venezuelae* YJ003-OTBP3. J. Microbiol. Biotechnol. 18: 88-94.

## CHROMOSOMAL LOCATION

Genetic locus: TGDS (human) mapping to 13q32.1.

## SOURCE

RmIB (I-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of RmIB of human origin.

#### PRODUCT

Each vial contains 100  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84587 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

RmlB (I-16) is recommended for detection of RmlB 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).

RmIB (I-16) is also recommended for detection of RmIB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RmIB siRNA (h): sc-76409, RmIB siRNA (m): sc-152983, RmIB shRNA Plasmid (h): sc-76409-SH, RmIB shRNA Plasmid (m): sc-152983-SH, RmIB shRNA (h) Lentiviral Particles: sc-76409-V and RmIB shRNA (m) Lentiviral Particles: sc-152983-V.

Molecular Weight of RmIB: 40 kDa.

# **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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: 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<sup>™</sup> Mounting Medium: sc-24941.

# **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.