

C13orf42 (B-4): sc-376095

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.

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. and Giordano, A. 2006. RB and cell cycle progression. *Oncogene* 25: 5220-5227.
4. 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.
4. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: LINC00371 (human) mapping to 13q14.3; Gm4131 (mouse) mapping to 14 D1.

SOURCE

C13orf42 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 21-51 near the N-terminus of C13orf42 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376095 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

C13orf42 (B-4) is recommended for detection of C13orf42 of human origin, Gm4131 of mouse origin and LOC102554746 of rat origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for C13orf42 siRNA (h): sc-105915, Gm4131 siRNA (m): sc-148181, C13orf42 shRNA Plasmid (h): sc-105915-SH, Gm4131 shRNA Plasmid (m): sc-148181-SH, C13orf42 shRNA (h) Lentiviral Particles: sc-105915-V and Gm4131 shRNA (m) Lentiviral Particles: sc-148181-V.

Molecular Weight (predicted) of C13orf42: 61 kDa.

Molecular Weight (observed) of C13orf42: 42-48 kDa.

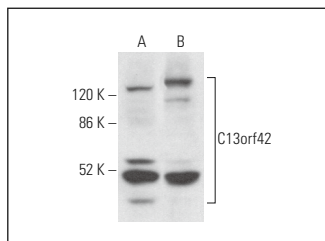
Positive Controls: HeLa whole cell lysate: sc-2200, 3T3-L1 cell lysate: sc-2243 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SUPPORT REAGENTS

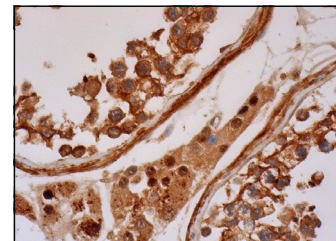
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



C13orf42 (B-4): sc-376095. Western blot analysis of C13orf42 expression in 3T3-L1 (A) and KNRK (B) whole cell lysates.



C13orf42 (B-4): sc-376095. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of cells in seminiferous ducts and Leydig cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.