

# LACC1 (H-6): sc-376064



The Power to Question

## BACKGROUND

LACC1 is a 430 amino acid protein that is encoded by a gene which maps to chromosome 13. 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 LACC1 gene product has been provisionally designated LACC1 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. 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.
5. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.
6. Hsu, H.F. and Hou, J.W. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. *Am. J. Med. Genet. A* 143A: 1739-1748.

## CHROMOSOMAL LOCATION

Genetic locus: LACC1 (human) mapping to 13q14.11; Lacc1 (mouse) mapping to 14 D3.

## SOURCE

LACC1 (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 251-283 within an internal region of LACC1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-376064 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

LACC1 (H-6) is recommended for detection of LACC1 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LACC1 siRNA (h): sc-105147, LACC1 siRNA (m): sc-140511, LACC1 shRNA Plasmid (h): sc-105147-SH, LACC1 shRNA Plasmid (m): sc-140511-SH, LACC1 shRNA (h) Lentiviral Particles: sc-105147-V and LACC1 shRNA (m) Lentiviral Particles: sc-140511-V.

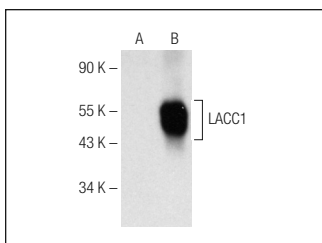
Molecular Weight of LACC1: 48 kDa.

Positive Controls: LACC1 (h): 293T Lysate: sc-115440.

## 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.

## DATA



LACC1 (H-6): sc-376064. Western blot analysis of LACC1 expression in non-transfected: sc-117752 (A) and human LACC1 transfected: sc-115440 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Assadi, G., et al. 2016. Functional analyses of the Crohn's disease risk gene LACC1. *PLoS ONE* 11: e0168276.
2. Aviel, Y.B., et al. 2021. A novel loss-of-function mutation in LACC1 underlies hereditary juvenile arthritis with extended intra-familial phenotypic heterogeneity. *Rheumatology* 60: 4888-4898.

## RESEARCH USE

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