SANTA CRUZ BIOTECHNOLOGY, INC.

LACC1 (E-12): sc-376231

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., 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.

CHROMOSOMAL LOCATION

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

SOURCE

LACC1 (E-12) is a mouse monoclonal antibody raised against amino acids 185-430 mapping at the C-terminus of LACC1 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.

LACC1 (E-12) is available conjugated to agarose (sc-376231 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376231 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376231 PE), fluorescein (sc-376231 FITC), Alexa Fluor® 488 (sc-376231 AF488), Alexa Fluor® 546 (sc-376231 AF546), Alexa Fluor® 594 (sc-376231 AF594) or Alexa Fluor® 647 (sc-376231 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376231 AF680) or Alexa Fluor® 790 (sc-376231 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

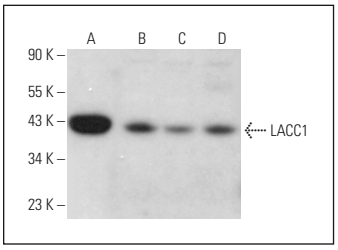
LACC1 (E-12) is recommended for detection of LACC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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.

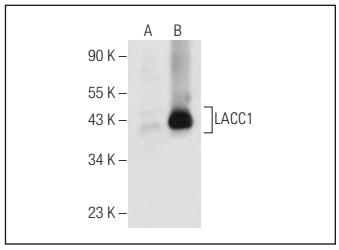
Molecular Weight of LACC1: 48 kDa.

Positive Controls: LACC1 (h): 293T Lysate: sc-115440, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



LACC1 (E-12): sc-376231. Western blot analysis of LACC1 expression in NIH/3T3 (**A**), HeLa (**B**), HCT-116 (**C**) and MDA-MB-231 (**D**) whole cell lysates.



LACC1 (E-12): sc-376231. 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. Cader, M.Z., et al. 2016. C13orf31 (FAMIN) is a central regulator of immunometabolic function. Nat. Immunol. 17: 1046-1056.
2. Assadi, G., et al. 2016. Functional analyses of the Crohn's disease risk gene LACC1. PLoS ONE 11: e0168276.
3. Cader, M.Z., et al. 2020. FAMIN is a multifunctional purine enzyme enabling the purine nucleotide cycle. Cell 180: 278-295.e23.
4. Gamara, J., et al. 2021. Arf6 regulates energy metabolism in neutrophils. Free Radic. Biol. Med. 172: 550-561.

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.