SANTA CRUZ BIOTECHNOLOGY, INC.

ZC3H13 (K-20): sc-84664



BACKGROUND

The zinc finger CCCH domain-containing protein 13 (ZC3H13) is a 1,668 amino acid protein that contains one C3H1-type zinc finger. ZC3H13 is phosphorylated upon DNA damage, most likely by ATM or ATR. Two isoforms of ZC3H13 exists as a result of alternative splicing events. The gene encoding ZC3H13 maps to chromosome 13, which 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. 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

- Dunham, A., Matthews, L.H., Burton, J., Ashurst, J.L., Howe, K.L., Ashcroft, K.J., Beare, D.M., Burford, D.C., Hunt, S.E., Griffiths-Jones, S., Jones, M.C., Keenan, S.J., Oliver, K., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
- Deng, H., Le, W.D., Xie, W.J. and Jankovic, J. 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.
- Bugge, M., Collins, A., Hertz, J.M., Eiberg, H., Lundsteen, C., Brandt, C.A., Bak, M., Hansen, C., Delozier, C.D., Lespinasse, J., Tranebjaerg, L., Hahnemann, J.M., Rasmussen, K., Bruun-Petersen, G., Duprez, L., Tommerup, N. and Petersen, M.B. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
- 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 143: 1739-1748.
- Hall, H.E., Chan, E.R., Collins, A., Judis, L., Shirley, S., Surti, U., Hoffner, L., Cockwell, A.E., Jacobs, P.A. and Hassold, T.J. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143: 2242-2248.
- Hassler, M., Singh, S., Yue, W.W., Luczynski, M., Lakbir, R., Sanchez-Sanchez, F., Bader, T., Pearl, L.H. and Mittnacht, S. 2007. Crystal structure of the retinoblastoma protein N domain provides insight into tumor suppression, ligand interaction and holoprotein architecture. Mol. Cell 28: 371-385.
- 9. Thorslund, T. and West, S.C. 2007. BRCA2: a universal recombinase regulator. Oncogene 26: 7720-7730.

CHROMOSOMAL LOCATION

Genetic locus: ZC3H13 (human) mapping to 13q14.13.

SOURCE

ZC3H13 (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ZC3H13 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-84664 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-84664 X, 200 $\mu g/0.1$ ml.

APPLICATIONS

ZC3H13 (K-20) is recommended for detection of ZC3H13 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).

ZC3H13 (K-20) is also recommended for detection of ZC3H13 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ZC3H13 siRNA (h): sc-76951, ZC3H13 shRNA Plasmid (h): sc-76951-SH and ZC3H13 shRNA (h) Lentiviral Particles: sc-76951-V.

ZC3H13 (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ZC3H13: 197/185 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[™] 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) 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[™] Mounting Medium: sc-24941.

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.