SANTA CRUZ BIOTECHNOLOGY, INC.

TET2 (h): 293T Lysate: sc-112685

BACKGROUND

TET2 (Tet oncogene family member 2), also known as KIAA1546, is a 2,002 amino acid protein that is expressed in a variety of tissues, including brain, kidney, heart, lung, muscle and stomach, and exists as three alternatively spliced isoforms. Murine TET2 is also known as protein Ayu17-449 and is thought to play a role in proper kidney development and overall kidney function, as well as in hormone secretion throughout the body. The gene encoding human TET2 maps to chromosome 4 and the gene encoding mouse TET2 maps to chromosome 3. Chromosome 4 encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease. Murine chromosome 3 houses over 1,300 genes, some of which express alcohol dehydrogenases (ADHs), sodium channel modifiers (SCNMs), interleukins (ILs) and Insulin receptor-related (IRR) proteins. Defects in chromosome 3-localized genes are associated with hereditary congenital facial paresis (HCFP), increased susceptibility to spontaneous colitis, HIV-1-associated nephropathy, decreased renal vascular health and malignant sporadic pancreatic endocrine tumors.

REFERENCES

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2. Guo, S.S., et al. 2002. Frequent deletion of chromosome 3 in malignant sporadic pancreatic endocrine tumors. Mol. Cell. Endocrinol. 190: 109-114.
3. Okazaki, N., et al. 2003. Prediction of the coding sequences of mouse homologues of KIAA gene: III. The complete nucleotide sequences of 500 mouse KIAA-homologous cDNAs identified by screening of terminal sequences of cDNA clones randomly sampled from size-fractionated libraries. DNA Res. 10: 167-180.
4. Lorsbach, R.B., et al. 2003. TET1, a member of a novel protein family, is fused to MLL in acute myeloid leukemia containing the t(10;11)(q22;q23). Leukemia 17: 637-641.
5. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
6. Tang, H., et al. 2006. Generation of Ayu17-449 gene knockout mice by gene trapping. Yi Chuan 28: 129-132.
7. Tang, H., et al. 2006. Cloning and expression analysis of a murine novel gene, Ayu17-449. Yi Chuan Xue Bao 33: 413-419.
8. Tang, H., et al. 2008. Characterization of Ayu17-449 gene expression and resultant kidney pathology in a knockout mouse model. Transgenic Res. 17: 599-608.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: TET2 (human) mapping to 4q24.

PRODUCT

TET2 (h): 293T Lysate represents a lysate of human TET2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TET2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TET2 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.