SANTA CRUZ BIOTECHNOLOGY, INC.

17β-HSD13 (K-14): sc-161285



BACKGROUND

17β-HSD13 (17β hydroxysteroid dehydrogenase type 13), also designated Short-chain dehydrogenase/reductase 9 (SCDR9), belongs to the 17β-HSD family of proteins, which regulate the availability of steroids within various tissues throughout the body. 17β-HSD13 is a 300 amino acid secreted protein that is highly expressed in liver and is also detected in ovary, bone marrow, kidney, brain, lung, skeletal muscle, bladder and testis. The gene encoding 17β-HSD13 maps to chromosome 4, which houses 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.

REFERENCES

- Chen, C.S., Bejcek, B.E. and Kersey, J.H. 1995. A mapping study of 13 genes on human chromosome bands 4q11→q25. Cytogenet. Cell Genet. 69: 260-265.
- Hillier, L.W., Fulton, R.S., Fulton, L.A., Graves, T.A., Pepin, K.H., Wagner-McPherson, C., Layman, D., Maas, J., Jaeger, S., Walker, R., Wylie, K., Sekhon, M., Becker, M.C., O'Laughlin, M.D., Schaller, M.E., et al. 2003. The DNA sequence of human chromosome 7. Nature 424: 157-164.
- 3. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.
- Liu, S., Huang, C., Li, D., Ren, W., Zhang, H., Qi, M., Li, X. and Yu, L. 2007. Molecular cloning and expression analysis of a new gene for short-chain dehydrogenase/reductase 9. Acta Biochim. Pol. 54: 213-218.
- Versteegh, F.G., Buma, S.A., Costin, G., de Jong, W.C. and Hennekam, R.C. 2007. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. Am. J. Med. Genet. A 143A: 2113-2121.
- Doherty, E.S., Lacbawan, F., Hadley, D.W., Brewer, C., Zalewski, C., Kim, H.J., Solomon, B., Rosenbaum, K., Domingo, D.L., Hart, T.C., Brooks, B.P., Immken, L., Lowry, R.B., Kimonis, V., Shanske, A.L., Jehee, F.S., et al. 2007. Muenke syndrome (FGFR3-related craniosynostosis): expansion of the phenotype and review of the literature. Am. J. Med. Genet. A 143A: 3204-3215.
- Moe, M., Lien, S., Bendixen, C., Hedegaard, J., Hornshøj, H., Berget, I., Meuwissen, T.H. and Grindflek, E. 2008. Gene expression profiles in liver of pigs with extreme high and low levels of androstenone. BMC Vet. Res. 4: 29.

CHROMOSOMAL LOCATION

Genetic locus: HSD17B13 (human) mapping to 4q22.1; Hsd17b13 (mouse) mapping to 5 E5.

SOURCE

17 β -HSD13 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 17 β -HSD13 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161285 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

17β-HSD13 (K-14) is recommended for detection of 17β-HSD13 of mouse, rat and 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); non cross-reactive with other 17β-HSD family members.

 17β -HSD13 (K-14) is also recommended for detection of 17β -HSD13 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for 17 β -HSD13 siRNA (h): sc-89308, 17 β -HSD13 siRNA (m): sc-108263, 17 β -HSD13 shRNA Plasmid (h): sc-89308-SH, 17 β -HSD13 shRNA Plasmid (m): sc-108263-SH, 17 β -HSD13 shRNA (h) Lentiviral Particles: sc-89308-V and 17 β -HSD13 shRNA (m) Lentiviral Particles: sc-108263-V.

Molecular Weight of 17_B-HSD13 isoform 1/2: 30/34 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.