

17 β -HSD12 (D-13): sc-161281

BACKGROUND

17 β -HSD12 (hydroxysteroid (17 β) dehydrogenase 12), also known as KAR or SDR12C1, is a 312 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and is a member of the short-chain dehydrogenases/reductases (SDR) family. Highly expressed in ovary and mammary glands, 17 β -HSD12 catalyzes the transformation of estrone (E1) into estradiol (E2), suggesting a central role in estrogen formation. 17 β -HSD12 may also play a role in long fatty acid elongation by reducing both long chain 3-ketoacyl-CoAs and long chain fatty acyl-CoAs. 17 β -HSD12 is transcriptionally regulated by SREBP-1 (sterol regulatory element binding protein 1), and is encoded by a gene that maps to human chromosome 11p11.2.

REFERENCES

- Zhou, L.Y., et al. 2005. Cloning, expression and characterization of three types of 17 β -hydroxysteroid dehydrogenases from the Nile tilapia, *Oreochromis niloticus*. *J. Mol. Endocrinol.* 35: 103-116.
- Luu-The, V., et al. 2006. Characterization of type 12 17 β -hydroxysteroid dehydrogenase, an isoform of type 3 17 β -hydroxysteroid dehydrogenase responsible for estradiol formation in women. *Mol. Endocrinol.* 20: 437-443.
- Liu, H., et al. 2007. Expression and localization of estrogenic type 12 17 β -hydroxysteroid dehydrogenase in the cynomolgus monkey. *BMC Biochem.* 8: 2.
- Blanchard, P.G. and Luu-The, V. 2007. Differential androgen and estrogen substrates specificity in the mouse and primates type 12 17 β -hydroxysteroid dehydrogenase. *J. Endocrinol.* 194: 449-455.
- Day, J.M., et al. 2008. 17 β -hydroxysteroid dehydrogenase Type 1, and not Type 12, is a target for endocrine therapy of hormone-dependent breast cancer. *Int. J. Cancer* 122: 1931-1940.

CHROMOSOMAL LOCATION

Genetic locus: HSD17B12 (human) mapping to 11p11.2; Hsd17b12 (mouse) mapping to 2 E1.

SOURCE

17 β -HSD12 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 17 β -HSD12 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161281 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

17 β -HSD12 (D-13) is recommended for detection of 17 β -HSD12 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 17 β -HSD family members.

17 β -HSD12 (D-13) is also recommended for detection of 17 β -HSD12 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for 17 β -HSD12 siRNA (h): sc-96987, 17 β -HSD12 siRNA (m): sc-108262, 17 β -HSD12 shRNA Plasmid (h): sc-96987-SH, 17 β -HSD12 shRNA Plasmid (m): sc-108262-SH, 17 β -HSD12 shRNA (h) Lentiviral Particles: sc-96987-V and 17 β -HSD12 shRNA (m) Lentiviral Particles: sc-108262-V.

Molecular Weight of 17 β -HSD12: 33 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) Immunofluorescence: 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.

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.