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3 β -HSD (h3): 293T Lysate: sc-173256

BACKGROUND

3 β -hydroxysteroid dehydrogenase (3 β -HSD), also known as HSD3B1 or HSDB3, is a bifunctional enzyme that plays a crucial role in the synthesis of all classes of hormonal steroids. Two human 3 β -HSD proteins, designated type I (3 β -HSD) and type II (3 β -HSD2), are expressed by different genes and function in different areas of the body. Localized to the membrane of the endoplasmic reticulum (ER) and expressed in skin and placenta, 3 β -HSD is the type I protein that catalyzes the oxidative conversion of δ^5 -ene-3- β -hydroxy steroid, as well as the conversion of various ketosteroids. Defects in the gene encoding 3 β -HSD are associated with classic salt wasting, genital ambiguity, hypogonadism, Insulin-resistant polycystic ovary syndrome (PCOS) and an increased susceptibility to prostate cancer. Additionally, congenital deficiency of 3 β -HSD activity results in a severe depletion of steroid formation which can be lethal in young children.

REFERENCES

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3. Foti, D.M. and Reichardt, J.K. 2004. YY1 binding within the human HSD3B2 gene intron 1 is required for maximal basal promoter activity: identification of YY1 as the 3 β 1-A factor. *J. Mol. Endocrinol.* 33: 99-9119.
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5. Carbanaru, G., et al. 2004. The hormonal phenotype of nonclassic 3 β -hydroxysteroid dehydrogenase (HSD3B) deficiency in hyperandrogenic females is associated with Insulin-resistant polycystic ovary syndrome and is not a variant of inherited HSD3B2 deficiency. *J. Clin. Endocrinol. Metab.* 89: 783-794.
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7. Wang, L., et al. 2007. Human 3 β -hydroxysteroid dehydrogenase types 1 and 2: Gene sequence variation and functional genomics. *J. Steroid Biochem. Mol. Biol.* 107: 88-99.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: HSD3B1 (human) mapping to 1p12.

PRODUCT

3 β -HSD (h3): 293T Lysate represents a lysate of human 3 β -HSD transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

3 β -HSD (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive 3 β -HSD antibodies. Recommended use: 10-20 μ l per lane.

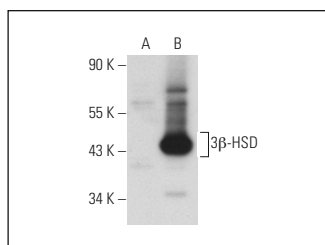
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

3 β -HSD (37-2): sc-100466 is recommended as a positive control antibody for Western Blot analysis of enhanced human 3 β -HSD expression in 3 β -HSD transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



3 β -HSD (37-2): sc-100466. Western blot analysis of 3 β -HSD expression in non-transfected: sc-117752 (A) and human 3 β -HSD transfected: sc-173256 (B) 293T whole cell lysates.

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.