

17 β -HSD4 (B-5): sc-271825

BACKGROUND

17 β -HSD4 (17 β -hydroxysteroid dehydrogenase type 4) is also known as peroxisomal multifunctional enzyme/protein 2 (MFE-2/MFP-2), D-bifunctional enzyme or 17- β Estradiol dehydrogenase type IV. It belongs to the 17 β -HSD family of proteins that regulate the availability of steroids within various tissues throughout the body. 17 β -HSD4 inactivates Estradiol through its oxidative activity but it is primarily involved in peroxisomal fatty acid and cholesterol β -oxidation. It has a multi-domain structure: the dehydrogenase domain is fused to a hydratase and a lipid transfer domain. 17 β -HSD4 is a target protein of chromeceptin and it is essential for the downstream activation of Stat6. 17 β -HSD4-deficient patients exhibit Zellweger-like syndrome and die within the first year of life. They display neuronal migration defects, facial dysmorphisms, severe hypotonia and convulsions in the neonatal period.

REFERENCES

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- Kobayashi, K., et al. 2004. Expression of estrogen receptor α and 17 β -hydroxysteroid dehydrogenase 4 in the ciliary body. *Graefes Arch. Clin. Exp. Ophthalmol.* 242: 172-176.
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- Nguyen, T., et al. 2006. Failure of microtubule-mediated peroxisome division and trafficking in disorders with reduced peroxisome abundance. *J. Cell Sci.* 119: 636-645.
- Huyghe, S., et al. 2006. Peroxisomal multifunctional protein 2 is essential for lipid homeostasis in sertoli cells and male fertility in mice. *Endocrinology* 147: 2228-2236.
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CHROMOSOMAL LOCATION

Genetic locus: HSD17B4 (human) mapping to 5q23.1.

SOURCE

17 β -HSD4 (B-5) is a mouse monoclonal antibody raised against amino acids 31-330 mapping within an internal region of 17 β -HSD4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

17 β -HSD4 (B-5) is recommended for detection of 17 β -HSD4 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for 17 β -HSD4 siRNA (h): sc-61918, 17 β -HSD4 shRNA Plasmid (h): sc-61918-SH and 17 β -HSD4 shRNA (h) Lentiviral Particles: sc-61918-V.

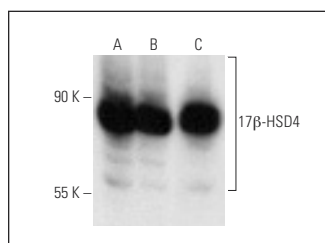
Molecular Weight of 17 β -HSD4: 81 kDa.

Positive Controls: MOLT-4 whole cell lysate: sc-2233, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

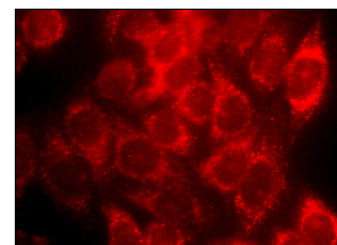
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



17 β -HSD4 (B-5): sc-271825. Western blot analysis of 17 β -HSD4 expression in MOLT-4 (A), K-562 (B) and Jurkat (C) whole cell lysates.



17 β -HSD4 (B-5): sc-271825. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.