



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# 11 $\beta$ -HSD1 (D-5): sc-518168

## BACKGROUND

Glucocorticoid hormone action in target tissues is modulated by 11 $\beta$ -hydroxysteroid dehydrogenase (11 $\beta$ -HSD), which catalyzes the interconversion of hormonally active C11-hydroxylated corticosteroids (cortisol, corticosterone) and their inactive C11-keto metabolites (cortisone, 11-dehydrocorticosterone). At least two isoforms of 11 $\beta$ -HSD exist: a low-affinity NADP-dependent dehydrogenase/oxoreductase (11 $\beta$ -HSD1) and a high-affinity NAD-dependent dehydrogenase (11 $\beta$ -HSD2). The glycosylated 11 $\beta$ -HSD1 protein activates cortisol from cortisone, which is widely expressed in mammals, and is most highly expressed in the liver. 11 $\beta$ -HSD2 inactivates cortisol to cortisone and is expressed in placenta, aldosterone target tissues (kidney, parotid, colon and skin) and pancreas. 11 $\beta$ -HSD1 may play a role in glucose homeostasis and pathogenesis of a number of disorders including Insulin resistance and obesity. 11 $\beta$ -HSD2 associates with differentiation or maturation in human colonic epithelia and may serve as a marker in development and disease. In addition, 11 $\beta$ -HSD2 plays a crucial role in modulating mineralocorticoid and glucocorticoid receptor occupancy by glucocorticoids.

## REFERENCES

1. Tannin, G.M., et al. 1991. The human gene for 11 $\beta$ -hydroxysteroid dehydrogenase. Structure, tissue distribution, and chromosomal localization. *J. Biol. Chem.* 266: 16653-16658.
2. Albiston, A.L., et al. 1994. Cloning and tissue distribution of the human 11 $\beta$ -hydroxysteroid dehydrogenase type 2 enzyme. *Mol. Cell. Endocrinol.* 105: R11-R17.
3. Brown, R.W., et al. 1996. Cloning and production of antisera to human placental 11 $\beta$ -hydroxysteroid dehydrogenase type 2. *Biochem. J.* 313: 1007-1017.

## CHROMOSOMAL LOCATION

Genetic locus: HSD11B1 (human) mapping to 1q32.2; Hsd11b1 (mouse) mapping to 1 H6.

## SOURCE

11 $\beta$ -HSD1 (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 90-112 of 11 $\beta$ -HSD1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

11 $\beta$ -HSD1 (D-5) is available conjugated to agarose (sc-518168 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518168 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518168 PE), fluorescein (sc-518168 FITC), Alexa Fluor<sup>®</sup> 488 (sc-518168 AF488), Alexa Fluor<sup>®</sup> 546 (sc-518168 AF546), Alexa Fluor<sup>®</sup> 594 (sc-518168 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-518168 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-518168 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-518168 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

11 $\beta$ -HSD1 (D-5) is recommended for detection of 11 $\beta$ -HSD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 11 $\beta$ -HSD1 siRNA (h): sc-41377, 11 $\beta$ -HSD1 siRNA (m): sc-41378, 11 $\beta$ -HSD1 shRNA Plasmid (h): sc-41377-SH, 11 $\beta$ -HSD1 shRNA Plasmid (m): sc-41378-SH, 11 $\beta$ -HSD1 shRNA (h) Lentiviral Particles: sc-41377-V and 11 $\beta$ -HSD1 shRNA (m) Lentiviral Particles: sc-41378-V.

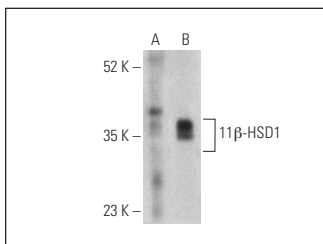
Molecular Weight of 11 $\beta$ -HSD1: 34 kDa.

Positive Controls: human liver extract: sc-363766 or Hep G2 cell lysate: sc-2227.

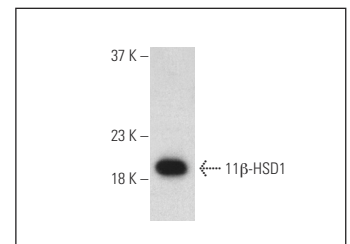
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



11 $\beta$ -HSD1 (D-5): sc-518168. Western blot analysis of 11 $\beta$ -HSD1 expression in human liver tissue extract (A) and Hep G2 whole cell lysate (B). Detection reagent used: m-IgG<sub>1</sub> BP-HRP: sc-525408.



11 $\beta$ -HSD1 (D-5): sc-518168. Western blot analysis of mouse recombinant 11 $\beta$ -HSD1. Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-516102.

## 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](http://www.scbt.com) for detailed protocols and support products.