

DMRT1 (S-12): sc-104885

BACKGROUND

DMRT1 (doublesex- and MAB-3-related transcription factor 1), also known as DMT1 or DM domain expressed in testis protein 1, is a 373 amino acid protein that contains a highly conserved zinc finger-like DNA-binding motif (DM domain). The DMRT genes encode a large family of transcription factors that participate in the sexual development of vertebrates and invertebrates. In humans, DMRT1 is expressed only in testis and is transported to the nucleus by karyopherin β 1. DMRT1 is required for testis development and may be involved in the formation of the seminiferous tubules. The gene encoding DMRT1 exhibits a gonad-specific and sexually dimorphic expression pattern during embryogenesis in mammals and birds. Hemizyosity of the DMRT1 gene results in abnormal testicular development and XY feminization. DMRT1 is expressed as four isoforms due to alternative splicing.

REFERENCES

- Chen, J.K., et al. 2001. DMRT1 expression is regulated by follicle-stimulating hormone and phorbol esters in postnatal Sertoli cells. *Endocrinology* 142: 1167-1178.
- Pask, A.J., et al. 2003. Expression of DMRT1 in the mammalian ovary and testis—from marsupials to mice. *Cytogenet. Genome Res.* 101: 229-236.
- Unup, K., et al. 2004. Three patients with 9p deletions including DMRT1 and DMRT2: a girl with XY complement, bilateral ovotestes, and extreme growth retardation, and two XX females with normal pubertal development. *Am. J. Med. Genet. A* 130A: 415-423.
- Yao, K., et al. 2006. Analysis of regulatory regions of mammalian DMRT1 genes. *Yi Chuan* 28: 825-830.
- Cheng, H.H., et al. 2006. Transcriptional diversity of DMRT1 (dsx- and MAB-3-related transcription factor 1) in human testis. *Cell Res.* 16: 389-393.

CHROMOSOMAL LOCATION

Genetic locus: DMRT1 (human) mapping to 9p24.3; Dmrt1 (mouse) mapping to 19 B.

SOURCE

DMRT1 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DMRT1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-104885 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-104885 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

DMRT1 (S-12) is recommended for detection of DMRT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 DMRT1 siRNA (h): sc-92489, DMRT1 siRNA (m): sc-143060, DMRT1 shRNA Plasmid (h): sc-92489-SH, DMRT1 shRNA Plasmid (m): sc-143060-SH, DMRT1 shRNA (h) Lentiviral Particles: sc-92489-V and DMRT1 shRNA (m) Lentiviral Particles: sc-143060-V.

DMRT1 (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

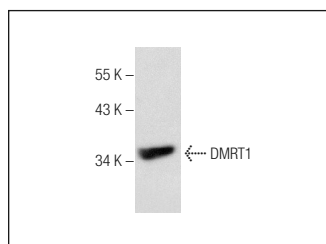
Molecular Weight of DMRT1: 39 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Hs 181 Tes whole cell lysate: sc-364779 or human testis extract: sc-363781.

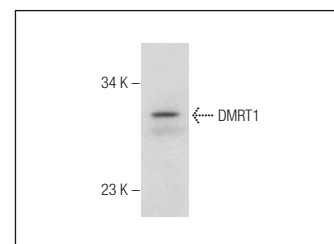
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DMRT1 (S-12): sc-104885. Western blot analysis of DMRT1 expression in Hs 181.Tes whole cell lysate.



DMRT1 (S-12): sc-104885. Western blot analysis of DMRT1 expression in human testis tissue extract.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **DMRT1 (A-9): sc-377167** or **DMRT1 (SS6): sc-101024**, our highly recommended monoclonal alternatives to DMRT1 (S-12).