

DMRTB1 (D-13): sc-131495

BACKGROUND

In humans, the DMRT genes encode a large family of transcription factors that are related to the *Drosophila* doublesex proteins. Expressed primarily in the gonads, the DMRT proteins contain cysteine-rich DNA-binding motifs and are thought to play an important role in sexual development. DMRTB1 (*Doublesex*- and *mab-3*-related transcription factor B1) is a 342 amino acid protein that contains one DM DNA-binding domain and belongs to the DMRT family. Localized to the nucleus and expressed in the testis, DMRTB1 may participate in developmental processes and, via its DM domain, may bind to DNA and regulate transcription.

REFERENCES

1. Brunner, B., et al. 2001. Genomic organization and expression of the *Doublesex*-related gene cluster in vertebrates and detection of putative regulatory regions for DMRT1. *Genomics* 77: 8-17.
2. Ottolenghi, C., et al. 2002. Novel paralogy relations among human chromosomes support a link between the phylogeny of *Doublesex*-related genes and the evolution of sex determination. *Genomics* 79: 333-343.
3. Kim, S., et al. 2003. Sexually dimorphic expression of multiple *Doublesex*-related genes in the embryonic mouse gonad. *Gene Expr. Patterns* 3: 77-82.
4. Shui, Y., et al. 2004. Cloning of four members of giant panda DMRT genes. *Yi Chuan Xue Bao* 31: 468-473.
5. Hong, C.S., et al. 2007. The function of DMRT genes in vertebrate development: it is not just about sex. *Dev. Biol.* 310: 1-9.
6. El-Mogharbel, N., et al. 2007. DMRT gene cluster analysis in the platypus: new insights into genomic organization and regulatory regions. *Genomics* 89: 10-21.
7. Matsushita, Y., et al. 2007. Expression of DMRT genes in the gonads of *Rana rugosa* during sex determination. *Zool. Sci.* 24: 95-99.

CHROMOSOMAL LOCATION

Genetic locus: DMRTB1 (human) mapping to 1p32.3; *Dmrtb1* (mouse) mapping to 4 C7.

SOURCE

DMRTB1 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DMRTB1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131495 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-131495 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

DMRTB1 (D-13) is recommended for detection of DMRTB1 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 DMRT family members.

DMRTB1 (D-13) is also recommended for detection of DMRTB1 in additional species, including bovine.

Suitable for use as control antibody for DMRTB1 siRNA (h): sc-88525, DMRTB1 siRNA (m): sc-143062, DMRTB1 shRNA Plasmid (h): sc-88525-SH, DMRTB1 shRNA Plasmid (m): sc-143062-SH, DMRTB1 shRNA (h) Lentiviral Particles: sc-88525-V and DMRTB1 shRNA (m) Lentiviral Particles: sc-143062-V.

DMRTB1 (D-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DMRTB1: 36 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.