

DMRT2 (C-16): sc-74606

BACKGROUND

In humans, the DMRT (doublesex and mab-3 related transcription factor) genes encode a large family of transcription factors that are related to the *Drosophila* doublesex proteins. Expressed primarily in the gonads, DMRT proteins contain cysteine-rich DNA-binding motifs and are thought to play an important role in sexual development. DMRT2 (doublesex and MAB-3 related transcription factor 2), also known as DSXL2, is a 226 amino acid nuclear protein that contains one DM DNA-binding domain and belongs to the DMRT family. Expressed in kidney, testis and skeletal muscle, DMRT2 shares 80% sequence identity with DMRT1 and may play a role in gonad development. The gene encoding DMRT2 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Raymond, C.S., Shamu, C.E., Shen, M.M., Seifert, K.J., Hirsch, B., Hodgkin, J. and Zarkower, D. 1998. Evidence for evolutionary conservation of sex-determining genes. *Nature* 391: 691-695.
2. Raymond, C.S., Parker, E.D., Kettlewell, J.R., Brown, L.G., Page, D.C., Kusz, K., Jaruzelska, J., Reinberg, Y., Flejter, W.L., Bardwell, V.J., Hirsch, B. and Zarkower, D. 1999. A region of human chromosome 9p required for testis development contains two genes related to known sexual regulators. *Hum. Mol. Genet.* 8: 989-996.
3. Ottolenghi, C., Veitia, R., Barbieri, M., Fellous, M. and McElreavey, K. 2000. The human doublesex-related gene, DMRT2, is homologous to a gene involved in somitogenesis and encodes a potential bicistronic transcript. *Genomics* 64: 179-186.
4. Calvari, V., Bertini, V., De Grandi, A., Peverali, G., Zuffardi, O., Ferguson-Smith, M., Knudtson, J., Camerino, G., Borsani, G. and Guioli, S. 2000. A new submicroscopic deletion that refines the 9p region for sex reversal. *Genomics* 65: 203-212.
5. Muroya, K., Okuyama, T., Goishi, K., Ogiso, Y., Fukuda, S., Kameyama, J., Sato, H., Suzuki, Y., Terasaki, H., Gomyo, H., Wakui, K., Fukushima, Y. and Ogata, T. 2000. Sex-determining gene(s) on distal 9p: clinical and molecular studies in six cases. *J. Clin. Endocrinol. Metab.* 85: 3094-3100.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 604935. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: DMRT2 (human) mapping to 9p24.3; Dmrt2 (mouse) mapping to 19 C1.

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.

SOURCE

DMRT2 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DMRT2 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-74606 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-74606 X, 200 µg/0.1 ml.

APPLICATIONS

DMRT2 (C-16) is recommended for detection of DMRT2 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).

DMRT2 (C-16) is also recommended for detection of DMRT2 in additional species, including bovine and porcine.

Suitable for use as control antibody for DMRT2 siRNA (h): sc-77157, DMRT2 siRNA (m): sc-77158, DMRT2 shRNA Plasmid (h): sc-77157-SH, DMRT2 shRNA Plasmid (m): sc-77158-SH, DMRT2 shRNA (h) Lentiviral Particles: sc-77157-V and DMRT2 shRNA (m) Lentiviral Particles: sc-77158-V.

DMRT2 (C-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DMRT2: 24 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.

RESEARCH USE

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