



Morc4 (E-14): sc-131187

BACKGROUND

The Microrchidia (Morc) family of proteins includes four predicted members in human (Morc1, Morc2, Morc3 and Morc4) and five in mice (Morc1, Morc2a, Morc2b, Morc3 and Morc4). Morc4 (MORC family CW-type zinc finger protein 4), also known as ZCWCC2 (Zinc finger CW-type coiled-coil domain protein 2), is a 937 amino acid protein that contains a CW-type zinc finger, HATPase-c domain, nuclear matrix-binding domain, nuclear localization signals and a coiled-coil region. Ubiquitously expressed at low levels, Morc4 shows highest expression levels in testis and placenta. B cells of patients with diffuse large B cell lymphoma show higher levels of Morc4 mRNA than normal B cells, suggesting that Morc4 is a potential lymphoma biomarker.

REFERENCES

1. Watson, M.L., Zinn, A.R., Inoue, N., Hess, K.D., Cobb, J., Handel, M.A., Halaban, R., Duchene, C.C., Albright, G.M. and Moreadith, R.W. 1998. Identification of Morc (microrchidia), a mutation that results in arrest of spermatogenesis at an early meiotic stage in the mouse. *Proc. Natl. Acad. Sci. USA* 95: 14361-14366.
2. Inoue, N., Hess, K.D., Moreadith, R.W., Richardson, L.L., Handel, M.A., Watson, M.L. and Zinn, A.R. 1999. New gene family defined by Morc, a nuclear protein required for mouse spermatogenesis. *Hum. Mol. Genet.* 8: 1201-1207.
3. Inoue, N., Wei, F., Seldin, M.F., Zinn, A.R. and Watson, M.L. 2000. Assignment of microrchidia (Morc) to mouse chromosome 16 by interspecific backcross linkage analysis and human chromosome 3q13 using somatic cell hybrids and *in situ* hybridization. *Cytogenet. Cell Genet.* 90: 123-125.
4. Kimura, Y., Sakai, F., Nakano, O., Kasaki, O., Sugimoto, H., Sawamura, T., Sadano, H. and Osumi, T. 2002. The newly identified human nuclear protein NXP-2 possesses three distinct domains, the nuclear matrix-binding, RNA-binding, and coiled-coil domains. *J. Biol. Chem.* 277: 20611-20617.
5. Liggins, A.P., Cooper, C.D., Lawrie, C.H., Brown, P.J., Collins, G.P., Hatton, C.S., Pulford, K. and Banham, A.H. 2007. Morc4, a novel member of the MORC family, is highly expressed in a subset of diffuse large B cell lymphomas. *Br. J. Haematol.* 138: 479-486.
6. Morgensztern, D., Martin, M.G. and Lossos, I.S. 2007. Gene expression profiling in diffuse large B cell lymphoma. *Leuk. Lymphoma.* 48: 669-682.
7. Imami, K., Sugiyama, N., Kyono, Y., Tomita, M. and Ishihama, Y. 2008. Automated phosphoproteome analysis for cultured cancer cells by two-dimensional nanoLC-MS using a calcined titania/C18 biphasic column. *Anal. Sci.* 24: 161-166.
8. Iyer, L.M., Abhiman, S. and Aravind, L. 2008. MutL homologs in restriction-modification systems and the origin of eukaryotic Morc ATPases. *Biol. Direct.* 3: 8.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: MORC4 (human) mapping to Xq22.3; Morc4 (mouse) mapping to X F1.

SOURCE

Morc4 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Morc4 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-131187 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Morc4 (E-14) is recommended for detection of Morc4 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 Morc family members .

Suitable for use as control antibody for Morc4 siRNA (h): sc-91331, Morc4 siRNA (m): sc-149504, Morc4 shRNA Plasmid (h): sc-91331-SH, Morc4 shRNA Plasmid (m): sc-149504-SH, Morc4 shRNA (h) Lentiviral Particles: sc-91331-V and Morc4 shRNA (m) Lentiviral Particles: sc-149504-V.

Molecular Weight of Morc4: 106 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.

PROTOCOLS

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