SANTA CRUZ BIOTECHNOLOGY, INC.

Morc3 (N-17): sc-83729

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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). Morc family CW-type zinc finger protein 3 (Morc3), also known as zinc finger CW-type coiled-coil domain protein 3 (ZCWCC3), is a 939 amino acid protein belonging to the MORC family. Ubiquitously expressed in human cell lines, Morc3 contains one CW-type zinc finger and is localized to the nuclear matrix. Morc3 has been shown to play a role in recruiting p53 and SP-100 to promyelocytic leukemia (PML)-nuclear bodies (NBs). Furthermore, Morc3 regulates p53 activation in a manner dependent on Morc3-ATPase activity.

REFERENCES

1. Nagase, T., Seki, N., Tanaka, A., Ishikawa, K. and Nomura, N. 1995. Prediction of the coding sequences of unidentified human genes. IV. The coding sequences of 40 new genes (KIAA0121-KIAA0160) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 2: 167-174, 199.
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., Kisaki, 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. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610078. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. 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.
7. Takahashi, K., Yoshida, N., Murakami, N., Kawata, K., Ishizaki, H., Tanaka-Okamoto, M., Miyoshi, J., Zinn, A.R., Shime, H. and Inoue, N. 2007. Dynamic regulation of p53 subnuclear localization and senescence by Morc3. Mol. Biol. Cell 18: 1701-1709.
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.

CHROMOSOMAL LOCATION

Genetic locus: MORC3 (human) mapping to 21q22.12; Morc3 (mouse) mapping to 16 C4.

SOURCE

Morc3 (N-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Morc3 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83729 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Morc3 (N-17) is recommended for detection of Morc3 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).

Morc3 (N-17) is also recommended for detection of Morc3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Morc3 siRNA (h): sc-91533, Morc3 siRNA (m): sc-149503, Morc3 shRNA Plasmid (h): sc-91533-SH, Morc3 shRNA Plasmid (m): sc-149503-SH, Morc3 shRNA (h) Lentiviral Particles: sc-91533-V and Morc3 shRNA (m) Lentiviral Particles: sc-149503-V.

Molecular Weight of Morc3: 107 kDa.

Positive Controls: Mouse heart extract: sc-2254.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

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.