SANTA CRUZ BIOTECHNOLOGY, INC.

MORF4/L1/2 (D-9): sc-514659

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The members of the mortality factor family include mortality factor 4 (MORF4), mortality factor 4 like 1 (MORF4L1), also known as MORF4-related gene 15 (MRG15), and mortality factor 4 like 2 (MORF4L2), also known as MORF-4 related gene X (MRGX). The human MORF4 gene maps to chromosome 4q34.1. MORF4 induces a senescent-like phenotype in complementation group B immortal cell lines. The genes encoding MORF4L1 and MORF4L2 map to chromosomes 15q25.1 and Xq22.2, respectively. MORF4, MORF4L1 and MORF4L2 each contain a C-terminal leucine zipper. An association between MORF4L1, Rb (retinoblastoma tumor suppressor) and PAM14 (protein associ-ated with MORF4L1) suggests a role for MORF4L1 in transcription regulation. MORF4L1 also associates with the histone acetyl transferase MOF. In addition, MORF4, MORF4L1 and MORF4L2 interact with mSin3A and TLE (transducin-like enhancer of split). The MORF/mSin3A/TLE association may repress transcription. In Purkinje cells, MORF4L1 localizes to the dendrites and the nuclei.

REFERENCES

1. Bertram, M.J., et al. 1999. Identification of a gene that reverses the immortal phenotype of a subset of cells and is a member of a novel family of transcription factor-like genes. Mol. Cell. Biol. 19: 1479-1485.
2. Leung, J.K., et al. 2001. MRG15 activates the B-Myb promoter through formation of a nuclear complex with the retinoblastoma protein and the novel protein PAM14. J. Biol. Chem. 276: 39171-39178.
3. Pardo, P.S., et al. 2002. MRG15, a novel chromodomain protein, is present in two distinct multiprotein complexes involved in transcriptional activation. J. Biol. Chem. 277: 50860-50866.
4. Yochum, G.S., et al. 2002. Role for the mortality factors MORF4, MRGX, and MRG15 in transcriptional repression via associations with Pf1, mSin3A, and transducin-like enhancer of split. Mol. Cell. Biol. 22: 7868-7876.
5. Matsuoka, Y., et al. 2002. A chromodomain-containing nuclear protein, MRG15 is expressed as a novel type of dendritic mRNA in neurons. Neurosci. Res. 42: 299-308.

CHROMOSOMAL LOCATION

Genetic locus: MORF4L1 (human) mapping to 15q25.1, MORF4L2 (human) mapping to Xq22.2; Morf4l1 (mouse) mapping to 9 E3.1, Morf4l2 (mouse) mapping to X F1.

SOURCE

MORF4/L1/2 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 152-178 within an internal region of MORF4L1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514659 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MORF4/L1/2 (D-9) is recommended for detection of MORF4L1 and MORF4L2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Molecular Weight of MORF4L1: 41/37/27 kDa.

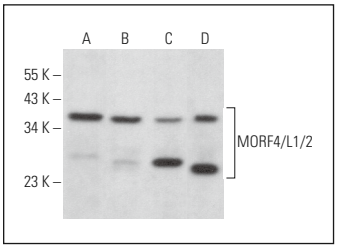
Molecular Weight of MORF4L2: 32 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148, K-562 nuclear extract: sc-2130 or A549 cell lysate: sc-2413.

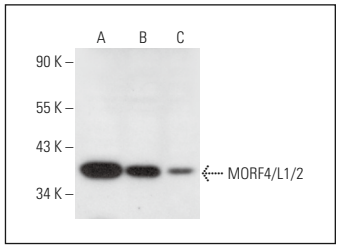
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MORF4/L1/2 (D-9): sc-514659. Western blot analysis of MORF4/L1/2 expression in A549 (**A**), Neuro-2A (**B**) and c4 (**C**) whole cell lysates and NIH/3T3 nuclear extract (**D**).



MORF4/L1/2 (D-9): sc-514659. Western blot analysis of MORF4/L1/2 expression in IMR-32 (**A**), K-562 (**B**) and COLO 320DM (**C**) nuclear extracts.

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 for detailed protocols and support products.