MDFIC (L-12): sc-163066

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BACKGROUND

MDFIC (MyoD family inhibitor domain-containing protein), also known as HIC, is a 355 amino acid protein that exists as 2 alternatively spliced isoforms, known as p40 and p32, which localize predominately to the nucleolus and cytoplasm, respectively. Expressed in prostate, thymus, spleen and small intestine, MDFIC functions to modulate the expression of viral genomes, specifically down-regulating the transcription of HIV-1 and up-regulating the expression of HTLV-1 (T-cell leukemia virus type I). Additionally, MDFIC is able to adjust the amount of β-catenin within the cell and may also function to regulate the Wnt and JNK signaling pathways. The gene encoding MDFIC maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Thébault, S., et al. 2000. Sequence requirement for the nucleolar localization of human I-mfa domain-containing protein (HIC p40). Eur. J. Cell Biol. 79: 834-838.

2. Thεbault, S., et al. 2000. Molecular cloning of a novel human I-mfa domain-containing protein that differently regulates human T-cell leukemia virus type I and HIV-1 expression. J. Biol. Chem. 275: 4848-4857.

3. Kusano, S., et al. 2002. I-mfa domain proteins interact with Axin and affect its regulation of the Wnt and c-Jun N-terminal kinase signaling pathways. Mol. Cell. Biol. 22: 6393-6405.

4. Young, T.M., et al. 2003. The human I-mfa domain-containing protein, HIC, interacts with cyclin T1 and modulates P-TEFb-dependent transcription. Mol. Cell. Biol. 23: 6373-6384.

5. Gautier, V.W., et al. 2005. Direct interaction of the human I-mfa domain-containing protein, HIC, with HIV-1 Tat results in cytoplasmic sequestration and control of Tat activity. Proc. Natl. Acad. Sci. USA 102: 16362-16367.

6. Wang, Q., et al. 2007. Developmental regulators containing the I-mfa domain interact with T cyclins and Tat and modulate transcription. J. Mol. Biol. 367: 630-646.

7. Cigognini, D., et al. 2007. HIC gene, a candidate suppressor gene within a minimal region of loss at 7q31.1 in myeloid neoplasms. Leuk. Res. 31: 477-482.

CHROMOSOMAL LOCATION

Genetic locus: MDFIC (human) mapping to 7q31.1; Mdfic (mouse) mapping to 6 A1.

SOURCE

MDFIC (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MDFIC of human origin.

RESEARCH USE

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

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-163066 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MDFIC (L-12) is recommended for detection of MDFIC 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).

Suitable for use as control antibody for MDFIC siRNA (h): sc-89686, MDFIC siRNA (m): sc-149335, MDFIC shRNA Plasmid (h): sc-89686-SH, MDFIC shRNA Plasmid (m): sc-149335-SH, MDFIC shRNA (h) Lentiviral Particles: sc-89686-V and MDFIC shRNA (m) Lentiviral Particles: sc-149335-V.

Molecular Weight of MDFIC p32 isoform: 32 kDa.

Molecular Weight of MDFIC p40 isoform: 40 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or MDFIC (m): 293T Lysate: sc-178926.

DATA
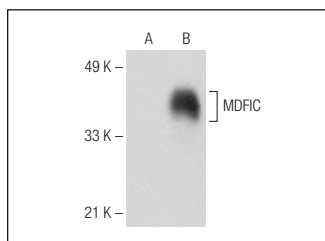
MDFIC (L-12): sc-163066. Western blot analysis of MDFIC expression in non-transfected: sc-117752 (**A**) and mouse MDFIC transfected: sc-178926 (**B**) 293T whole cell lysates.

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.

MONOS
Satisfation
Guaranteed

Try **MDFIC (D-9): sc-515212**, our highly recommended monoclonal alternative to MDFIC (L-12).