

Meis1/2 (C-17): sc-10599

BACKGROUND

Hox, Pbx, and Meis families of transcription factors form heteromeric complexes and bind DNA through specific homeobox domains. Hox proteins are involved in regulating tissue patterning during development, and they are also expressed in lineage- and stage-specific patterns during adult hematopoietic differentiation and in leukemias. The Hox proteins, which include paralog groups 1 to 10, have a low intrinsic binding affinity for DNA and are instead associated into cooperative DNA binding complexes with Pbx or the Pbx related Meis proteins, which result in an enhanced Hox-DNA binding affinity and an increased selectivity for the binding site. Both Meis1 and 2 (also known as Meis-related gene 1) are members of the TALE (three amino acid loop extension) family of homeodomain-containing proteins. In addition to binding with Hox proteins, Meis1 also forms heterodimers with the ubiquitously expressed Pbx proteins, including Pbx1, Pbx2 and Pbx3, and these complexes contain distinct DNA-binding specificities. Like Hox and Pbx proteins, Meis1 is implicated in oncogenesis as it is overexpressed as a result of adjacent retroviral insertion in BHL-2 myeloid leukemias. Two Meis related proteins, Meis2 and Meis3 (also designated Mrg1 and Mrg2, respectively), possess largely similar sequence identity with Meis1 and are expressed in normal tissues and myeloid leukemias. In the pancreas, Meis2 preferentially associates with Pbx1, and together they associate with the pancreas-specific homeodomain factor, Pdx1, to repress Pdx1-induced transcriptional activation.

CHROMOSOMAL LOCATION

Genetic locus: MEIS1 (human) mapping to 2p14, MEIS2 (human) mapping to 15q14; Meis1 (mouse) mapping to 11 A3.1, Meis2 (mouse) mapping to 2 E4.

SOURCE

Meis1/2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Meis1 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-10599 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-10599 X, 200 µg/0.1 ml.

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.

APPLICATIONS

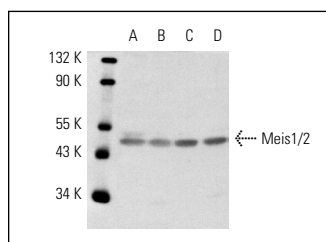
Meis1/2 (C-17) is recommended for detection of Meis1 and Meis2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Meis1/2 (C-17) is also recommended for detection of Meis1 and Meis2 in additional species, including equine, bovine and avian.

Suitable for use as control antibody for Meis1/2 siRNA (h): sc-43922, Meis1/2 siRNA (m): sc-43923, Meis1/2 shRNA Plasmid (h): sc-43922-SH, Meis1/2 shRNA Plasmid (m): sc-43923-SH, Meis1/2 shRNA (h) Lentiviral Particles: sc-43922-V and Meis1/2 shRNA (m) Lentiviral Particles: sc-43923-V.

Meis1/2 (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Meis1: 53/63 kDa.

DATA



Meis1/2 (C-17): sc-10599. Western blot analysis of Meis1/2 expression in MCP-5 (A), MEG-01 (B), CCRF-CEM (C) and IMR-32 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kirito, K., et al. 2004. Thrombopoietin induces HoxA9 nuclear transport in immature hematopoietic cells: potential mechanism by which the hormone favorably affects hematopoietic stem cells. *Mol. Cell. Biol.* 24: 6751-6762.
2. Qin, P., et al. 2004. Retinoic acid regulates the expression of PBX1, PBX2, and PBX3 in P19 cells both transcriptionally and post-translationally. *J. Cell. Biochem.* 92: 147-163.
3. Xiong, M., et al. 2011. Association of controlled ovarian hyperstimulation treatment with down-regulation of key regulators involved in embryonic implantation in mice. *J. Huazhong Univ. Sci. Technol. Med. Sci.* 31: 535-542.
4. Mahmoud, A.I., et al. 2013. Meis1 regulates postnatal cardiomyocyte cell cycle arrest. *Nature* 497: 249-253.

MONOS
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Try **Meis1/2/3 (9.2.7): sc-101850** or **Meis2 (H-10): sc-515470**, our highly recommended monoclonal alternatives to Meis1/2 (C-17).