SANTA CRUZ BIOTECHNOLOGY, INC.

SEBOX (M-18): sc-244103

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SEBOX is a 216 amino acid protein that belongs to the paired homeobox family. The human SEBOX protein contains a central homeodomain and shares 63% amino acid identity with mouse Sebox. Homeodomain proteins, such as SEBOX, play a key role in coordinating gene expression during development. Localizing to nucleus, SEBOX is a probable transcription factor involved in the control of specification of mesoderm and endoderm. SEBOX is the only member of the Sebox gene family in the human genome. Compared with mouse Sebox, the human protein has substitutions at the normally invariant residues asn51 and arg53, suggesting it may be nonfunctional. Sebox expression has been detected in adult mouse brain, skin, ovary and liver. Containing three exons, the SEBOX gene is conserved in canine, bovine, mouse, rat and zebrafish, and maps to human chromosome 17q11.2.

REFERENCES

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2. Cinquanta, M., et al. 2000. Mouse Sebox homeobox gene expression in skin, brain, oocytes, and two-cell embryos. Proc. Natl. Acad. Sci. USA 97: 8904-8909.
3. Poulain, M., et al. 2002. Mezzo, a paired-like homeobox protein is an immediate target of Nodal signalling and regulates endoderm specification in zebrafish. Development 129: 4901-4914.
4. Suzumori, N., et al. 2002. Nobox is a homeobox-encoding gene preferentially expressed in primordial and growing oocytes. Mech. Dev. 111: 137-141.
5. Holland, P.W., et al. 2007. Classification and nomenclature of all human homeobox genes. BMC Biol. 5: 47.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610975. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Kim, K.H., et al. 2008. SEBOX is essential for early embryogenesis at the two-cell stage in the mouse. Biol. Reprod. 79: 1192-1201.

CHROMOSOMAL LOCATION

Genetic locus: Sebox (mouse) mapping to 11 B5.

SOURCE

SEBOX (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SEBOX of mouse 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-244103 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-244103 X, 200 µg/0.1 ml.

APPLICATIONS

SEBOX (M-18) is recommended for detection of SEBOX of mouse and rat 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 SEBOX siRNA (m): sc-153293, SEBOX shRNA Plasmid (m): sc-153293-SH and SEBOX shRNA (m) Lentiviral Particles: sc-153293-V.

SEBOX (M-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SEBOX: 23 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.

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.