SANTA CRUZ BIOTECHNOLOGY, INC.

Evx-1 (397.3): sc-81962

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Homeodomain proteins are transcription factors that control gene expression in order to regulate development in all eukaryotes. Hox genes are required for the establishment of regional identities along body axes. The vertebrate Hox genes map closely to even-skipped homolog protein 1 (Evx-1) and Evx-2, homeodomain proteins that are the homologs of the *Drosophila melanogaster* even skipped gene. Evx-1 maps to mouse chromosome 6, near the Hox-1 gene cluster. The close linkage of the Evx and Hox genes is distinct because Evx expression is partly controlled by mechanisms acting on the Hox genes. Evx-1 is expressed during embryonic development in the hindbrain, genital bud, developing neural tube and distal limb. Its expression is induced by the growth factor FGF-4. Evx-1 and Evx-2 belong to a homeodomain protein family that also controls body plan formation and plays a crucial role in gastrulation, neurogenesis, appendage development and tailbud formation.

REFERENCES

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2. Niswander, L., et al. 1994. FGF-4 regulates expression of Evx-1 in the developing mouse limb. Development 119: 287-294.
3. Niswander, L., et al. 1995. Function of FGF-4 in limb development. Mol. Reprod. Dev. 39: 83-88.
4. Herault, Y., et al. 1996. Function of the Evx-2 gene in the morphogenesis of vertebrate limbs. EMBO J. 15: 6727-6738.
5. Ferrier, D.E., et al. 2001. Amphioxus Evx genes: implications for the evolution of the midbrain-hindbrain boundary and the chordate tailbud. Dev. Biol. 237: 270-281.
6. Minguillón, C., et al. 2003. Genesis and evolution of the Evx and Mox genes and the extended Hox and ParaHox gene clusters. Genome Biol. 4: R12.
7. Lehoczky, J.A., et al. 2004. Conserved expression domains for genes upstream and within the HoxA and HoxD clusters suggests a long-range enhancer existed before cluster duplication. Evol. Dev. 6: 423-430.
8. Poppe, B., et al. 2005. HOXA gene cluster rearrangement in a t(7;9)(p15;q3) in a child with MDS. Cancer Genet. Cytogenet. 162: 82-84.
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CHROMOSOMAL LOCATION

Genetic locus: EVX1 (human) mapping to 7p15.2; Evx1 (mouse) mapping to 6 B3.

SOURCE

Evx-1 (397.3) is a mouse monoclonal antibody raised against recombinant Evx-1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Evx-1 (397.3) is recommended for detection of Evx-1 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Evx-1 siRNA (h): sc-62288, Evx-1 siRNA (m): sc-62289, Evx-1 shRNA Plasmid (h): sc-62288-SH, Evx-1 shRNA Plasmid (m): sc-62289-SH, Evx-1 shRNA (h) Lentiviral Particles: sc-62288-V and Evx-1 shRNA (m) Lentiviral Particles: sc-62289-V.

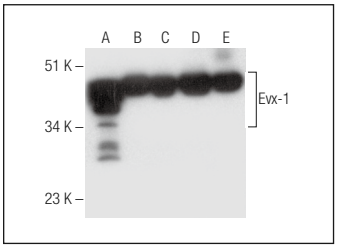
Molecular Weight of Evx-1: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

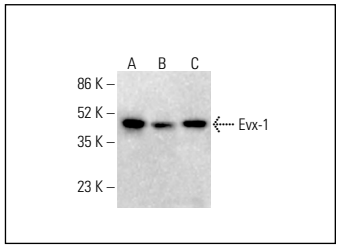
RECOMMENDED SUPPORT REAGENTS

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).

DATA



Evx-1 (397.3): sc-81962. Western blot analysis of Evx-1 expression in HeLa (**A**), Jurkat (**B**), A-431 (**C**) and HS 181.Tes (**D**) whole cell lysates and mouse testis tissue extract (**E**).



Evx-1 (397.3): sc-81962. Western blot analysis of Evx-1 expression in HeLa (**A**), K-562 (**B**) and HCT-116 (**C**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

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 for detailed protocols and support products.