SANTA CRUZ BIOTECHNOLOGY, INC.

HoxD13 (H-40): sc-66927

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Hox proteins play a role in development and cellular differentiation by regulating downstream target genes. Specifically, the Hox proteins direct DNA-protein and protein-protein interactions that assist in determining the morphologic features associated with the anterior-posterior body axis. HoxD13 is a sequence-specific transcription factor that provides cells with specific positional identities on the anterior-posterior axis of developing mammals. Defects in HoxD13 are the cause of synpolydactyly (SPD). SPD is a limb malformation that shows a characteristic manifestation in both hands and feet. This condition is inherited as an autosomal dominant trait with reduced penetrance. Defects in HoxD13 are also the cause of brachydactyly type D and type E.

REFERENCES

1. Mendioroz, J., et al. 2005. Sensorineural deafness, abnormal genitalia, synostosis of metacarpals and metatarsals 4 and 5, and mental retardation: description of a second patient and exclusion of HoxD13. Am. J. Med. Genet. A 135: 211-213.
2. Lin, Y.W., et al. 2005. NUP98-HoxD13 transgenic mice develop a highly penetrant, severe myelodysplastic syndrome that progresses to acute leukemia. Blood 106: 287-295.
3. Pineault, N., et al. 2005. Transplantable cell lines generated with NUP98-Hox fusion genes undergo leukemic progression by Meis1 independent of its binding to DNA. Leukemia 19: 636-643.
4. Zhao, X.L., et al. 2005. HoxD13 polyalanine tract expansion in synpolydactyly: mutation detection and prenatal diagnosis in a large Chinese family. Zhonghua Yi Xue Yi Chuan Xue Za Zhi 22: 5-9.
5. Williams, T.M., et al. 2005. Range of Hox/TALE superclass associations and protein domain requirements for HoxA13:Meis interaction. Dev. Biol. 277: 457-471.
6. Williams, T.M., et al. 2005. Candidate downstream regulated genes of Hox group 13 transcription factors with and without monomeric DNA binding capability. Dev. Biol. 279:462-480.

CHROMOSOMAL LOCATION

Genetic locus: HOXD13 (human) mapping to 2q31.1; Hoxd13 (mouse) mapping to 2 C3.

SOURCE

HoxD13 (H-40) is a rabbit polyclonal antibody raised against amino acids 121-160 mapping within an internal region of HoxD13 of human origin.

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.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-66927 X, 200 µg/0.1 ml.

APPLICATIONS

HoxD13 (H-40) is recommended for detection of HoxD13 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).

HoxD13 (H-40) is also recommended for detection of HoxD13 in additional species, including bovine, porcine and avian.

Suitable for use as control antibody for HoxD13 siRNA (h): sc-45656, HoxD13 siRNA (m): sc-45657, HoxD13 shRNA Plasmid (h): sc-45656-SH, HoxD13 shRNA Plasmid (m): sc-45657-SH, HoxD13 shRNA (h) Lentiviral Particles: sc-45656-V and HoxD13 shRNA (m) Lentiviral Particles: sc-45657-V.

HoxD13 (H-40) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HoxD13: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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