SANTA CRUZ BIOTECHNOLOGY, INC.

HoxD12 (G-13): sc-82922

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Hox proteins are a family of transcription factors that 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. Hox proteins are involved in controlling axial patterning, leukemias and hereditary malformations. HoxD12 (homeobox D12), also known as HOX4H, is a 275 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. One of several members of the homeobox superfamily, HoxD12 functions as a sequence-specific transcription factor that is important for the correct positioning of developing limb buds on the anterior-posterior axis.

REFERENCES

1. D'Esposito, M., et al. 1991. EVX2, a human homeobox gene homologous to the even-skipped segmentation gene, is localized at the 5' end of HOX4 locus on chromosome 2. Genomics 10: 43-50.
2. Scott, M.P. 1992. Vertebrate homeobox gene nomenclature. Cell 71: 551-553.
3. Johnson, R.L. and Tabin, C.J. 1997. Molecular models for vertebrate limb development. Cell 90: 979-990.
4. Zákány, J. and Duboule, D. 1999. Hox genes and the making of sphincters. Nature 401: 761-762.
5. Goodman, F.R. 2002. Limb malformations and the human HOX genes. Am. J. Med. Genet. 112: 256-265.
6. Kmita, M., et al. 2002. Serial deletions and duplications suggest a mechanism for the collinearity of HoxD genes in limbs. Nature 420: 145-150.
7. Zákány, J., et al. 2004. A dual role for Hox genes in limb anterior-posterior asymmetry. Science 304: 1669-1672.
8. Tarchini, B., et al. 2006. Regulatory constraints in the evolution of the tetrapod limb anterior-posterior polarity. Nature 443: 985-988.

CHROMOSOMAL LOCATION

Genetic locus: HOXD12 (human) mapping to 2q31.1; Hoxd12 (mouse) mapping to 2 C3.

SOURCE

HoxD12 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HoxD12 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-82922 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

HoxD12 (G-13) is recommended for detection of HoxD12 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); non cross-reactive with other Hox family members.

HoxD12 (G-13) is also recommended for detection of HoxD12 in additional species, including bovine.

Suitable for use as control antibody for HoxD12 siRNA (h): sc-75293, HoxD12 siRNA (m): sc-75294, HoxD12 shRNA Plasmid (h): sc-75293-SH, HoxD12 shRNA Plasmid (m): sc-75294-SH, HoxD12 shRNA (h) Lentiviral Particles: sc-75293-V and HoxD12 shRNA (m) Lentiviral Particles: sc-75294-V.

HoxD12 (G-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HoxD12: 30 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.