HoxA6 (C-14): sc-104311

BACKGROUND

The Hox homeobox genes encode proteins that are transcriptional regulators with an established role in embryonic development. HoxA6 (homeobox A6), also known as HOX1B, is a 233 amino acid protein that localizes to the nucleus. Expressed during embryonic development, HoxA6 functions as a sequence-specific DNA-binding transcription factor that is part of a regulatory mechanism that provides cells with positional identities during development. Via its ability to bind DNA, HoxA6 plays an important role in the regulation of gene expression, as well as morphogenesis and differentiation. The gene encoding HoxA6 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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2. McAlpine, P.J. and Shows, T.B. 1990. Nomenclature for human homeobox genes. Genomics 7: 460.

3. Scott, M.P. 1992. Vertebrate homeobox gene nomenclature. Cell 71: 551-553.

4. Apiou, F., et al. 1996. Fine mapping of human HOX gene clusters. Cytogenet. Cell Genet. 73: 114-115.

5. Walters, J.R., et al. 1997. Differences in expression of homeobox transcription factors in proximal and distal human small intestine. Gastroenterology 113: 472-477.

6. Snell, E.A., et al. 1999. Genomic organization of the Hoxa4-Hoxa10 region from *Morone saxatilis:* implications for Hox gene evolution among vertebrates. J. Exp. Zool. 285: 41-49.

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CHROMOSOMAL LOCATION

Genetic locus: HOXA6 (human) mapping to 7p15.2; Hoxa6 (mouse) mapping to 6 B3.

SOURCE

HoxA6 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HoxA6 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-104311 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-104311 X, 200 µg/0.1 ml.

APPLICATIONS

HoxA6 (C-14) is recommended for detection of HoxA6 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).

Suitable for use as control antibody for HoxA6 siRNA (h): sc-89444, HoxA6 siRNA (m): sc-105537, HoxA6 shRNA Plasmid (h): sc-89444-SH, HoxA6 shRNA Plasmid (m): sc-105537-SH, HoxA6 shRNA (h) Lentiviral Particles: sc-89444-V and HoxA6 shRNA (m) Lentiviral Particles: sc-105537-V.

HoxA6 (C-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HoxA6: 26 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.