SANTA CRUZ BIOTECHNOLOGY, INC.

HMX1 (Y-22): sc-133662

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. HMX1 (H6 family homeobox 1), also known as H6 or NKX5-3, is a 373 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Existing as a member of the HMX homeobox family, HMX1 functions as a DNA-binding protein that binds to the core 5'-CAAG-3' DNA sequence and is thought to function as a transcriptional repressor, possibly playing a role in the development of facial structures, including the eye and ear. Defects in the gene encoding HMX1 are the cause of oculoauricular syndrome, a condition characterized by ocular coloboma, retinal pigment epithelium abnormalities, rod-cone dystrophy and anomalies of the external ear.

REFERENCES

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3. Wang, W., Yoshiura, K., Murray, J. and Lufkin, T. 1997. Assignment of the murine HMX1 homeobox gene to the proximal region of mouse chromosome 5. Mamm. Genome 8: 869-870.
4. Amendt, B.A., Sutherland, L.B. and Russo, A.F. 1999. Transcriptional antagonism between HMX1 and Nkx2.5 for a shared DNA-binding site. J. Biol. Chem. 274: 11635-11642.
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6. Schorderet, D.F., Nichini, O., Boisset, G., Polok, B., Tiab, L., Mayeur, H., Raji, B., de la Houssaye, G., Abitbol, M.M. and Munier, F.L. 2008. Mutation in the human homeobox gene NKX5-3 causes an oculo-auricular syndrome. Am. J. Hum. Genet. 82: 1178-1184.
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CHROMOSOMAL LOCATION

Genetic locus: HMX1 (human) mapping to 4var.

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.

SOURCE

HMX1 (Y-22) is an affinity purified rabbit polyclonal antibody raised against synthetic HMX1 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

HMX1 (Y-22) is recommended for detection of HMX1 of 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 HMX1 siRNA (h): sc-75269, HMX1 shRNA Plasmid (h): sc-75269-SH and HMX1 shRNA (h) Lentiviral Particles: sc-75269-V.

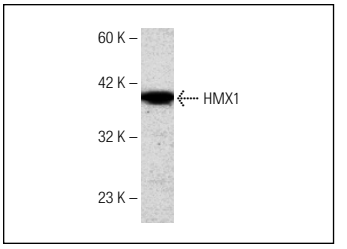
Molecular Weight of HMX1: 39 kDa.

Positive Controls: Daudi cell lysate: sc-2415.

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).

DATA



HMX1 (Y-22): sc-133662. Western blot analysis of HMX1 expression in Daudi whole cell lysate.

RESEARCH USE

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