SANTA CRUZ BIOTECHNOLOGY, INC.

Cdx2 (AMT28): sc-56818

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The members of the murine Cdx family (Cdx1, Cdx2 and Cdx4) are members of the caudal-type homeobox family of genes, which are homologs of the *Drosophila* "caudal" gene required for anterior-posterior regional identity. The intestine-specific transcription factors Cdx1 and Cdx2 are candidate genes for directing intestinal development, differentiation, proliferation and maintenance of the intestinal phenotype. The relative expression of Cdx1 to Cdx2 protein may be important in the anterior to posterior patterning of the intestinal epithelium and in defining patterns of proliferation and differentiation along the crypt-villus axis. Expression of the Cdx1 homeobox gene in epithelial intestinal cells promotes cellular growth and differentiation. Cdx1 positively regulates its own expression. Cdx1 and Cdx2 are expressed in the small intestine and colon of fetus and adult. A decrease in human Cdx1 and/or Cdx2 expression is associated with colorectal tumorigenesis. Both Cdx1 and Cdx2 genes must be expressed to reduce tumorigenic potential, to increase sensitivity to apoptosis and to reduce cell migration, suggesting that the two genes control the normal phenotype by independent pathways. The human Cdx1 gene maps to chromosome 5q33.1 and encodes a 265 amino acid protein.

REFERENCES

1. Bonner, C.A., et al. 1995. Isolation, characterization and precise physical localization of human Cdx1, a caudal-type homeobox gene. Genomics 28: 206-211.
2. Mallo, G.V., et al. 1997. Molecular cloning, sequencing and expression of the mRNA encoding human Cdx1 and Cdx2 homeobox. Downregulation of Cdx1 and Cdx2 mRNA expression during colorectal carcinogenesis. Int. J. Cancer 74: 35-44.
3. Mallo, G.V., et al. 1998. Expression of the Cdx1 and Cdx2 homeotic genes leads to reduced malignancy in colon cancer-derived cells. J. Biol. Chem. 273: 14030-14036.

CHROMOSOMAL LOCATION

Genetic locus: CDX2 (human) mapping to 13q12.2; Cdx2 (mouse) mapping to 5 G3.

SOURCE

Cdx2 (AMT28) is a mouse monoclonal antibody raised against 180 amino acids from the N-terminal region of Cdx2 of human origin.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG_1 with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

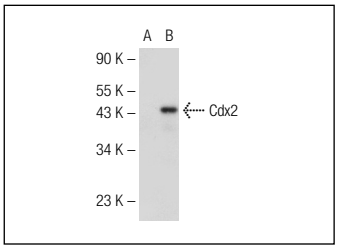
Cdx2 (AMT28) is recommended for detection of Cdx2 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for Cdx2 siRNA (h): sc-43680, Cdx2 siRNA (m): sc-142243, Cdx2 shRNA Plasmid (h): sc-43680-SH, Cdx2 shRNA Plasmid (m): sc-142243-SH, Cdx2 shRNA (h) Lentiviral Particles: sc-43680-V and Cdx2 shRNA (m) Lentiviral Particles: sc-142243-V.

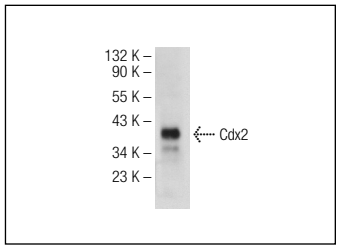
Molecular Weight of Cdx2: 40 kDa.

Positive Controls: Cdx2 (h2): 293T Lysate: sc-172943 or COLO 320DM cell lysate: sc-2226.

DATA



Cdx2 (AMT28): sc-56818. Western blot analysis of Cdx2 expression in non-transfected: sc-117752 (**A**) and human Cdx2 transfected: sc-172943 (**B**) 293T whole cell lysates.



Cdx2 (AMT28): sc-56818. Western blot analysis of Cdx2 expression in COLO 320DM whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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