SANTA CRUZ BIOTECHNOLOGY, INC.

Cdx2 (B-3): sc-166830

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 homologues 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.

CHROMOSOMAL LOCATION

Genetic locus: CDX2 (human) mapping to 13q12.2.

SOURCE

Cdx2 (B-3) is a mouse monoclonal antibody raised against amino acids 271-313 mapping at the C-terminus of Cdx2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

Cdx2 (B-3) is recommended for detection of Cdx2 of human origin by Western Blotting (starting dilution 1:100, 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).

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

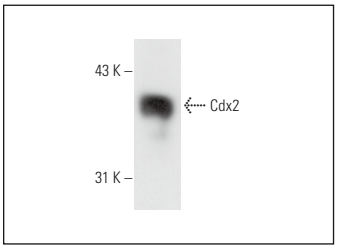
Molecular Weight of Cdx2: 40 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HeLa whole cell lysate: sc-2200 or COLO 320DM whole cell lysate: sc-2226.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdx2 (B-3): sc-166830. Western blot analysis of Cdx2 expression in COLO 320DM whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wang, C., et al. 2015. RBM46 regulates trophectoderm differentiation by stabilizing Cdx2 mRNA in early mouse embryos. Stem Cells Dev. 24: 904-915.
2. Lin, J., et al. 2016. Efficient derivation of extraembryonic endoderm stem cell lines from mouse postimplantation embryos. Sci. Rep. 6: 39457.
3. Lin, J., et al. 2017. PDGFRA is not essential for the derivation and maintenance of mouse extraembryonic endoderm stem cell lines. Stem Cell Reports 9: 1062-1070.
4. Malik, H.N., et al. 2020. Derivation of oocyte-like cells from putative embryonic stem cells and parthenogenetically activated into blastocysts in goat. Sci. Rep. 10: 10086.
5. Janati Idrissi, S., et al. 2022. Effect of DHA on the quality of *in vitro* produced bovine embryos. Theriogenology 187: 102-111.
6. Pennarossa, G., et al. 2023. Combination of epigenetic erasing and mechanical cues to generate human epiBlastoids from adult dermal fibroblasts. J. Assist. Reprod. Genet. 40: 1015-1027.
7. Deguchi, S., et al. 2024. Construction of multilayered small intestine-like tissue by reproducing interstitial flow. Cell Stem Cell 31: 1315-1326.e8.

PROTOCOLS

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