

# Cdx1 (N-20): sc-19473

## 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 5q32 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. Down-regulation 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.
4. Silberg, D.G., et al. 2000. Cdx1 and cdx2 expression during intestinal development. *Gastroenterology* 119: 961-971.
5. Allan, D., et al. 2001. RARgamma and Cdx1 interactions in vertebral patterning. *Dev. Biol.* 240: 46-60.
6. Soubeyran, P., et al. 2001. Homeobox gene Cdx1 regulates Ras, Rho and PI3 kinase pathways leading to transformation and tumorigenesis of intestinal epithelial cells. *Oncogene* 20: 4180-4187.
7. Moucadel, V., et al. 2001. Cdx1 promotes cellular growth of epithelial intestinal cells through induction of the secretory protein PAP I. *Eur. J. Cell Biol.* 80: 156-163.

## CHROMOSOMAL LOCATION

Genetic locus: CDX1 (human) mapping to 5q32; Cdx1 (mouse) mapping to 18 E1.

## SOURCE

Cdx1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cdx1 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-19473 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cdx1 (N-20) is recommended for detection of Cdx1 of mouse, rat and 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)], 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).

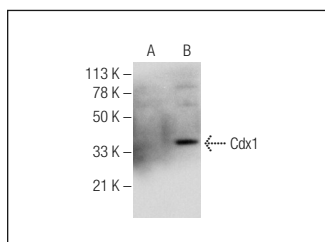
Cdx1 (N-20) is also recommended for detection of Cdx1 in additional species, including canine and bovine.

Suitable for use as control antibody for Cdx1 siRNA (h): sc-43679, Cdx1 siRNA (m): sc-142242, Cdx1 shRNA Plasmid (h): sc-43679-SH, Cdx1 shRNA Plasmid (m): sc-142242-SH, Cdx1 shRNA (h) Lentiviral Particles: sc-43679-V and Cdx1 shRNA (m) Lentiviral Particles: sc-142242-V.

Molecular Weight of Cdx1: 28 kDa.

Positive Controls: Cdx1 (m): 293T Lysate: sc-119160.

## DATA



Cdx1 (N-20): sc-19473. Western blot analysis of Cdx1 expression in non-transfected: sc-117752 (A) and mouse Cdx1 transfected: sc-119160 (B) 293T whole cell lysates.

## 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.


 MONOS  
Satisfation  
Guaranteed

Try **Cdx1 (D-4): sc-515146** or **Cdx1 (286.4): sc-130363**, our highly recommended monoclonal alternatives to Cdx1 (N-20).