



CDX2

IHC of CDX2 on an FFPE Colon Adenocarcinoma Tissue

Description CDX2 is a caudal-type homeobox gene that encodes an intestine-specific transcription factor expressed early in intestinal development and that may be involved in the regulation of proliferation and differentiation of intestinal epithelial cells. It is expressed in the nuclei of epithelial cells throughout the intestine, from duodenum to rectum.

The CDX2 protein is expressed in Primary and Metastatic Colorectal Carcinomas and has also been demonstrated in the intestinal metaplasia of the stomach and intestinal-type gastric cancer. It is not expressed in the normal gastric mucosa. Loss of CDX2 protein expression has been correlated with loss of differentiation in colorectal cancers. Anti-CDX2 antibody has been useful in distinguishing the gastrointestinal origin of Metastatic Adenocarcinomas and carcinoids. Studies have shown that CDX2 is a superior marker compared to CK20. A high percentage of Mucinous Carcinomas of the Ovary also stain positively with this antibody, as well as Carcinomas from the upper gastrointestinal tract.

Antibody Type	Rabbit Monoclonal	Clone	EPR2764Y
Isotype	IgG	Reactivity	Paraffin, Frozen
Localization	Nuclear	Control	Adenocarcinoma of Colon, Normal Colon
Storage	Store at 2°-8°C	Stability	Up to 36 Months

For long-term storage of the concentrated antibody, it is recommended that aliquots of the antibody be frozen at -20°C in glycerol 50% (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Dilute using an antibody diluent such as ImmunoDetector Protein Block/Antibody Diluent (BSB 0040 and BSB 0041) or ImmunoDNA Background Blocker (BSB 0103-BSB 0107).

Presentation Anti-CDX2 is a rabbit monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Availability	Catalog No.	Antibody Type	Dilution	Volume/QTY
	BSB 6057	Prediluted	Ready-To-Use	3.0 ml
	BSB 6058	Prediluted	Ready-To-Use	7.0 ml
	BSB 6059	Prediluted	Ready-To-Use	15.0 ml
	BSB 6060	Concentrated	1:10-1:50	0.1 ml
	BSB 6061	Concentrated	1:10-1:50	0.5 ml
	BSB 6062	Concentrated	1:10-1:50	1.0 ml
	BSB 6063	Control Slides		5

Note: For concentrated antibodies, please centrifuge prior to use to ensure recovery of all product.

- References**
- Levine PH, et al. *Diagn Cytopathology*. 2006;Mar;34(3):191-5
 - Mazziotta RM, et al. *App Immunohistochem Mol Morphol*. 2005;Mar;13(1):55-60
 - Saqi A, et al. *Am J Clin Pathol*. 2005;Mar;123(3):394-404
 - Erickson LA, et al. *Endocr Pathol*. 2004;fall;15(3):247-52
 - Saad RS, et al. *AM J Clin Pathol*. 2004;Sep;122(3):421-7
 - Kaimaktchiev V, et al. *Mod Pathol*. 2004;Nov;17(11):1392-9

Protocol Suggested protocol on reverse

Recommended Immunohistochemical Protocol

- Pretreatment**
1. Cut and mount 3-4 micron formalin-fixed paraffin-embedded tissues on positive charged slides.
 2. Air dry for 2 hours at 58° C.
 3. Deparaffinize, dehydrate and rehydrate tissues.
 4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as **ImmunoDNA Retriever with Citrate** (BSB 0020-BSB 0023) or **EDTA** (BSB 0030-BSB 0033).
 5. Any of three heating methods may be used:
 - a. **Electric Pressure Cooker**
Place standoff rack at base of pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high, and incubate for 15 minutes. Open and immediately transfer slides to room temperature.
 - b. **Water Bath Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a water bath set at 95°-99° C. Incubate for 30-60 minutes.
 - c. **Conventional Steamer Method**
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a Steamer, cover and steam for 30-60 minutes.
 6. After heat treatment, transfer slides in **ImmunoDNA Retriever with Citrate** or **EDTA** to room temperature and let stand for 15-20 minutes.
 7. Wash slides with IHC wash buffer or DI water.
 8. Continue IHC staining protocol.

Immunohistochemical Protocol

Step	ImmunoDetector (AP or HRP)	PolyDetector (AP or HRP)
Peroxidase/AP Block	5 minutes	5 minutes
Primary Antibody	30 minutes	45 minutes
Secondary Biotinylated Link	10 minutes	Not Applicable
AP or HRP Label	10 minutes	45 minutes
Substrate-Chromogen	5-10 minutes	10 minutes
Counterstaining	Time varies with counterstain	Time varies with counterstain

