

CDX2 (RM)

Format	Catalog no.	Pack size	Dilution
Concentrated	GB 3144 A, B	0.1, 0.5 mL	1:100
Prediluted	GB 3144 AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

The homeobox gene CDX2 genes for a transcription factor that is exclusive to the intestines. Metastatic colorectal adenocarcinoma can be distinguished from tumors of uncertain origin using CDX2, and it has also been helpful in determining the gastrointestinal origin of carcinoids and adenocarcinomas. CDX2 outperforms villin and CK20 in terms of specificity and sensitivity. Malignant germ cell tumors of the testes, cholangiocarcinoma, bladder adenocarcinoma, and mucinous ovarian cancer are among the cancers that express CDX2. Elevated levels of CDX2 expression were observed only in extremely rare cases of carcinomas of the genitourinary and gynecologic tracts, breast, lung, and head and neck malignancies. Recent research has demonstrated that a rabbit monoclonal antibody to CDX2 is a more sensitive clone than previous CDX2 monoclonal antibodies produced in mice. The data also showed that the number of false negatives was lower when using rabbit monoclonal CDX2. When contrasted with other monoclonal CDX2 antibodies for mice, the specificity was comparable. Nevertheless, a marginally greater proportion was shown by rabbit monoclonal CDX2 in specific malignancies. When used with CK7, TTF-1, and CDH1, a panel of CDX2 antibodies can greatly enhance their overall specificity.

INTENDED USE -

For the purpose of performing immunohistochemistry (IHC) on formalin-fixed paraffin-embedded (FFPE) human tissues, the CDX2 (RM) [EP25] rabbit monoclonal antibody is designed for usage in the lab. Morphological studies with appropriate controls should supplement clinical interpretation of staining or lack thereof; these findings should then be assessed by a trained pathologist in light of the patient's medical history and other diagnostic testing.

SUMMARY AND EXPLANATION -

An intestinal-specific transcription factor is encoded by the homeobox gene CDX2. Metastatic colorectal adenocarcinoma can be easily distinguished from tumors of unknown origin using CDX2, and it has also been beneficial in determining the

gastrointestinal origin of carcinoids and adenocarcinomas. Experimental evidence suggests that CDX2 is both more sensitive and specific than villin and CK20. Mucinous ovarian cancer, bladder adenocarcinoma, cholangiocarcinoma, and malignant germ cell tumors of the testes are among the cancers that have been found to exhibit CDX2. Cancers of the genitourinary and gynecologic tracts, as well as those of the breast, lungs, and head and neck, exhibited extremely uncommon instances of increased CDX2 expression. Research has demonstrated that the newly generated rabbit monoclonal CDX2 antibody is a more sensitive clone than previous CDX2 monoclonal antibodies produced in mice. Additionally, there was a decrease in false negatives with rabbit monoclonal CDX2. When contrasted with other monoclonal CDX2 antibodies in mice, the specificity was comparable. Nevertheless, rabbit monoclonal CDX2 showed a marginally greater proportion in certain malignancies. Including CK7, TTF-1, and CDH17 in a panel can greatly enhance the overall specificity of CDX2 antibodies .

PRINCIPLES OF PROCEDURE -

Immunohistochemistry is a multi-step method that can be used to detect antigens in cells and tissues. The primary antibody is bound to its specific epitope in the initial stage. A primary antibody can be used to identify the antigen, and then a one-step or two-step detection technique can be employed. An enzyme-labeled polymer will bind the main antibody in a one-step process. The addition of a linker antibody to attach to the primary antibody is the second stage of a two-phase process. After that, the linker antibody is bound using an enzyme-labeled polymer. As proof of these antibody binding detections, a colorimetric reaction is observed.

SOURCE - Rabbit monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - EP25

ISOTYPE - IgG

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - A synthetic peptide corresponding to residues near the C-term of human CDX2 protein

CELLULAR LOCALISATION - Nuclear

POSITIVE TISSUE CONTROL - Normal colon or colon cancer

KNOWN APPLICATIONS - Immunohistochemistry 30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Materials required but not provided -

- 1) Positive tissue control - Normal colon or colon cancer
- 2) Negative control tissue (internal or external)
- 3) Microscope slides and coverslips
- 4) Staining jars or baths
- 5) Timer
- 6) Xylene or xylene substitute
- 7) Ethanol or reagent alcohol
- 8) Deionized or distilled water
- 9) Heating equipment or enzyme for tissue pretreatment step
- 10) Detection system
- 11) Chromogen
- 12) Wash buffer
- 13) Hematoxylin
- 14) Antibody diluents
- 15) Peroxide block
- 16) Light microscope
- 17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.