

**MONOCLONAL ANTIBODY**

*For research use only. Not for diagnostic use.*

**Catalog No. NPM-M01**

# Anti Crumbs3 (Clone : 1B3-2D10)

## BACKGROUND

*Crumbs3 (Crb3)* encodes the single transmembrane protein and is essential for normal development of epithelial tissues. Crb3 localizes at the apical plasma membrane and affects tight junction formation in polarized epithelial cells in vitro. Positive expression of Crb3 is detected in epithelial cells of the majority of hollow organs whereas stromal cells are negative in vertebrates. Enhanced expression of Crb3 promotes tumor cell migration and metastasis in a part of carcinomas. Crb3a and Crb3b, two isoforms of Crb3, are generated by alternative splicing. 1B3-2D10 monoclonal antibody was raised against the synthetic peptide miming the Crb3a-specific amino acid sequence.

<b>Product type</b>	Primary antibody
<b>Immunogen</b>	VGARVPPTPNLKLPPEERLI (Human Crb3a, Accession # NP_631900, Val101-ILe120)
<b>Rased in</b>	Mouse
<b>Clone number</b>	1B3-2D10
<b>Isotype</b>	IgG2a,k
<b>Source</b>	Culture supernatant
<b>Purification</b>	Cation exchange / gel filtration
<b>Buffer</b>	Phosphate buffered saline containing 0.05 % ProClin300 as a preservative.
<b>Concentration</b>	Indicated on the product label.
<b>Volume</b>	50 ug
<b>Label</b>	Unlabeled
<b>Specificity</b>	Human Crb3 isoform a
<b>Reactivity</b>	human, mouse, porcine. Other species are not tested.
<b>Storage</b>	Store at 4 °C.
<b>Expiration date</b>	Indicated on the product label.

<b>Application notes</b>	• Immunohistochemistry (1~10 ug/mL).
<b>Recommended dilutions</b>	Other applications are not covered under warranty. Optimal dilutions/concentrations should be determined by the end user.

<b>References</b>	<ul style="list-style-type: none"> <li>• Iioka H., <i>et al.</i>, (2025) Crumbs3: Expression and biological significance in normal and neoplastic tissues. <i>Histol Histopathol.</i> 2025 Sep 24;18992. PMID: 40988573</li> <li>• Yokoyama Y., <i>et al.</i>, (2022) Crumbs3 is expressed in oral squamous cell carcinomas and promotes cell migration and proliferation by affecting RhoA activity. <i>Oncol Lett.</i> 23(6):173. PMID: 35497937.</li> <li>• Iioka H., <i>et al.</i>, (2019) Crumbs3 is a critical factor that regulates invasion and metastasis of colon adenocarcinoma via the specific interaction with FGFR1. <i>Int J Cancer</i>, 145(10):2740-2753. PMID: 30980524.</li> </ul>
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## ANTIBODY CHARACTERIZATION

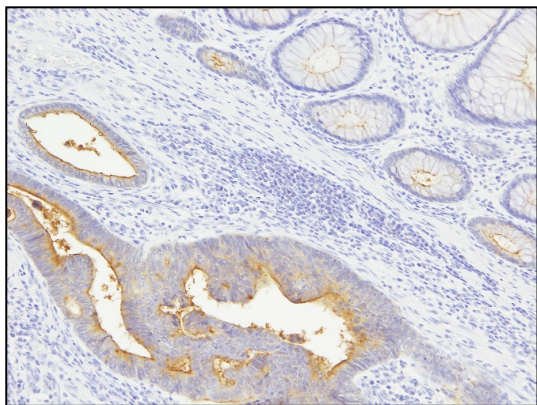


Fig.1 Immunohistochemical analysis of Crb3 in colon adenocarcinoma and adjacent non-neoplastic crypts in a patient tissue.

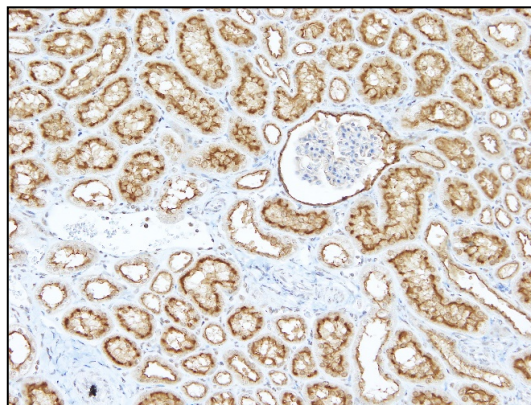


Fig.2 Immunohistochemical analysis of Crb3 in normal pig kidney.

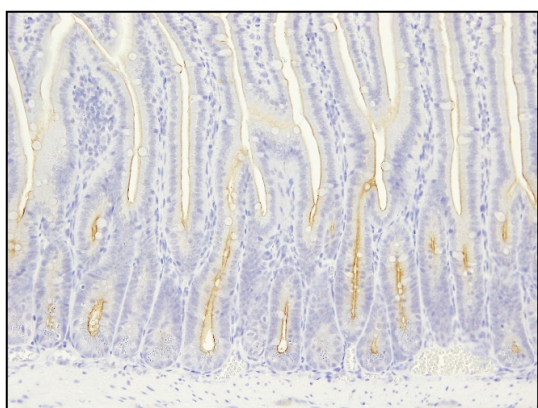


Fig.3 Immunohistochemical analysis of Crb3 in the intestine of immunodeficient mice.

The optimal protocol for immunohistochemistry using anti-Crb3 monoclonal (clone # 1B3-2D10) should be determined by the end-user based on the following protocol.

- Specimen: Formalin fixed paraffin embedded (FFPE) tissue section.
- Antigen retrieval: Heat-Induced Epitope Retrieval (HIER) in 10 mM citrate buffer (pH 6.0)
- Primary antibody: anti-Crb3 monoclonal (clone # 1B3-2D10), 1~10 ug/ml. Incubate for 12 hr at 4 °C in a humidified chamber.
- Secondary antibody: Histofine simple stain MAX-PO(M) (Nichirei Bioscience #424132). Incubate for 0.5 hr at room temperature in a humidified chamber.
- Staining: TaKaRa DAB Substrate (TaKaRa Bio #MK210)

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