WHITEPAPER

CDH17 – Improved sensitivity & specificity for identification of colon and stomach adenocarcinomas

BIOCARE MEDICAL

Studies have shown CDH17 to be a highly specific IHC marker for colon and stomach adenocarcinomas with improved sensitivity when compared to CK20 & CDX2.

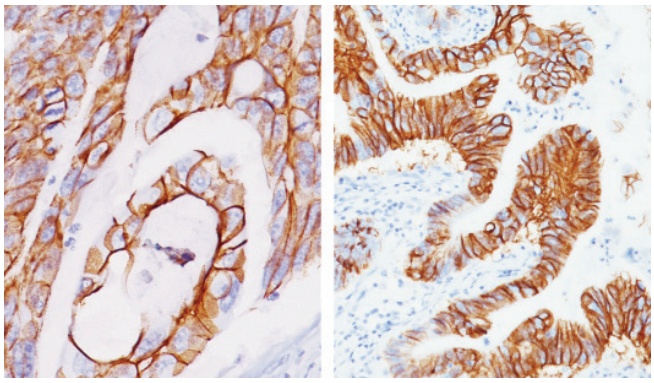
Metastatic carcinoma can present diagnostic challenges within the clinical pathology setting[1]. Historically, a panel consisting of CK7, CK20, and CDX2 has been relied upon to assess gastrointestinal (GI) tumors of unknown primary[2]. CDX2, a homeobox gene that encodes an intestine-specific transcription factor, has been shown to express in the nuclei of epithelial cells throughout the GI tract[3]. Cadherin 17 (CDH17), also referred to as liver-intestine cadherin, is a novel oncogene expressed in intestinal epithelium that has been found to be associated with tumor invasion and metastasis[4,5].

Recent studies have shown CDH17 to be a highly specific IHC marker for colon and stomach adenocarcinomas with improved sensitivity when compared to CK20 and CDX2[3]. This was found to be especially true in carcinomas where CK7, CDX2 and CK20 where negatively expressed.

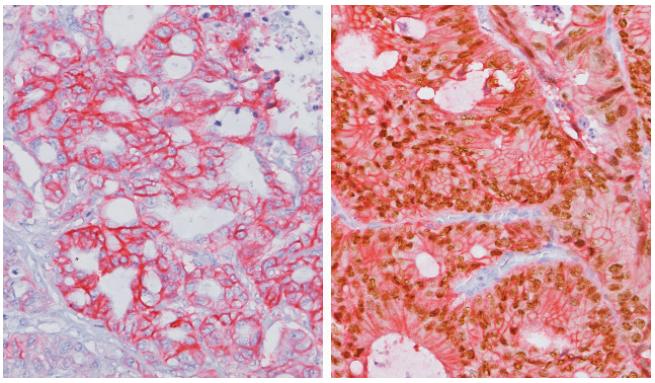
A mouse monoclonal CDH17 has been developed as a Class I IVD tool to aid in interpreting GI tumors, especially in cases of unknown primary origin. In addition, recent data suggests that the combination of CDX2 and CDH17 along with CK7 has been shown to be highly sensitive and specific for the identification of colorectal and stomach adenocarcinomas in routine IHC[3].

CDH17 Staining Specificity Compared Across Multiple Carcinomas[6]

Cancer Type	CHD17 (M)	CK20	CDX2
Colon adenocarcinoma	100% (99/99)	92% (91/99)	96% (95/99)
Stomach adenocarcinoma	73% (50/69)	28% (19/69)	16% (11/69)
Pancreatic adenocarcinoma	31% (12/39)	13% (5/39)	0% (0/39)
Ovarian cancers	31% (12/39)	14% (10/70)	13% (9/70)
Lung cancers	11% (8/70)	3% (2/71)	1% (1/71)
Prostate adenocarcinoma	0% (0/20)	0% (0/20)	0% (0/20)
Breast (infiltrating ductal carcinoma)	0% (0/13)	0% (0/13)	0% (0/13)
Urothelial carcinoma	0% (0/20)	0% (0/20)	0% (0/20)
Clear cell renal carcinoma	0% (0/10)	0% (0/10)	0% (0/10)
Melanoma	0% (0/6)	0% (0/6)	0% (0/6)
Liver cancer	2% (1/57)	7% (4/57)	0% (0/57)



(L) Colon adenocarcinoma stained with CDH17 antibody;
(R) Stomach adenocarcinoma stained with CDH17 antibody



(L) Colon cancer stained with CDH17 (+) and CDX2 (-);
(R) Colon cancer stained with CDH17 (+) and CDX2 (+)

To learn more about CDH17 and CDH17 + CDX2 multiplex cocktail, please contact us anytime 800-799-9499 or by going online:
https://biocare.net/product/cdh17-antibody/, https://biocare.net/product/cdx2-m-cdh17-rm/

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4. Panarelli NC, *et al.* Tissue-specific cadherin CDH17 is a useful marker of gastrointestinal adenocarcinomas with higher sensitivity than CDX2.Am J Clin Pathol. 2012 Aug;138(2):211-22.
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