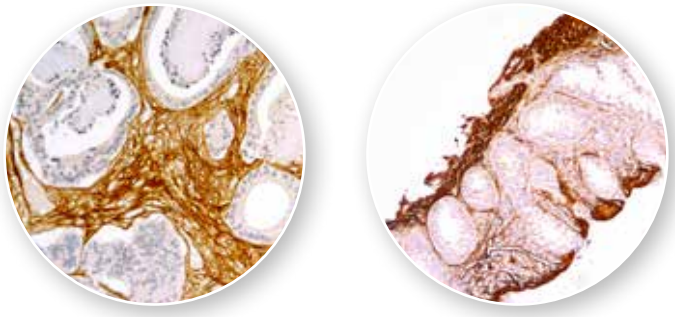
Tenascin C (TNC) – A marker for collagenous colitis

Tenascin C is an extracellular matrix glyco-protein associated with cell motility, proliferation and differentiation. It is widely expressed during embryogenesis but exhibits a very restricted pattern in adults. It is expressed in the lamina propria and in the basement membrane towards the mucosal surface of normal colon mucosa.

TNC has been shown to be upregulated under pathological conditions caused by inflammation and tumorigenesis. TNC can be detected in the stroma and the basement membrane of colorectal carcinomas [1,2]. In addition tumors of lung, prostate, breast, ovar, and glioma show increased TNC expression [3].

Tenascin C in collagenous colitis

Collagenous colitis is found in patients with long-term watery diarrhoea and normal or near-normal endoscopic findings. Its diagnostic feature is the presence of thick subepithelial bands of collagen deposits and an inflammatory infiltrate within the mucosa. The diagnosis of collagenous colitis can be challenging due to the discontinuous nature of the disease. The collagenous band-like deposit shows variations in thickness at different levels of the colon. The immunohistochemical detection of increased amounts of Tenascin C, selectively in the subepithelial zone, is a specific test for collagenous colitis, with a sensitivity superior to conventional histological and histochemical detection (hematoxylin and eosin, van Gieson's stain) [4]. In addition, Tenascin C immunohistochemistry allows for the diagnosis of collagenous colitis in biopsies obtained from rectum and sigmoid colon, thus avoiding the need for colonoscopic investigations[5].



Tenacin C (MSK104-05)
on colon carcinoma

Product information

Description	Reactivity	CE/IVD	Pre-treatment	Dilution	Volume	Cat. No.
Tenascin C Clone: DB7 Host: Mouse	Human	✓	HIER in EDTA pH 9.0	1:50-1:200	0.5 ml	MSK104-05

Bibliography

[1] Sakai T *et al.* Specific expression of Tenscin in human colonic neoplasms. Brit. J. Cancer 67: 1058-1064, 1993

[2] Hauptmann S *et al.* Extracellular matrix proteins in colorectal carcinomas. Expression of tenascin and fibronectin isoforms. Lab Invest 73: 172-182, 1995

[3] Midwood KS *et al.* Advances in tenascin-C biology. Cell Mol Life Sci 68: 3175-3199, 2011

[4] Anagnostopoulos I *et al.* Tenascin labelling in colorectal biopsies: a useful marker in the diagnosis of collagenous colitis. Histopathol 34: 425-431, 1999

[5] Müller S *et al.* Tenascin: a sensitive and specific diagnostic marker of minimal collagenous colitis. Virchows Arch 438:435-441, 2001

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