

Mouse Anti-Smoothelin [R4A]: MC0471, MC0471RTU7

Intended Use: For Research Use Only

Description: Smoothelin is a constituent of the smooth muscle cell cytoskeleton protein exclusively found in differentiated smooth muscle cells (SMC). Cells with SMC-like characteristics, such as myofibroblasts and myoepithelial cells, as well as skeletal and cardiac muscle do not contain smoothelin. To distinguish bladder muscularis mucosae (MM) from muscularis propria (MP) muscle bundles is crucial for accurate staging of bladder carcinoma. Strong smoothelin expression is nearly exclusively observed in muscularis propria. Therefore, the staining pattern of MP (strongly positive) and MM (negative or weakly positive) makes this technique an attractive diagnostic tool for the sometimes difficult task of staging bladder urothelial carcinoma such as in transurethral resection specimens of urinary bladder tumors. Differentiating between smooth muscle tumors and other mesenchymal neoplasms of the GI tract can be challenging in small biopsies. Anti-smoothelin immunostaining can be helpful in differentiating benign (+) from malignant smooth muscle tumors (-), and other mimics(-).

Specifications

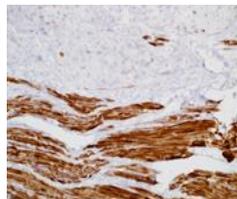
Clone: R4A
Source: Mouse
Isotype: IgG1k
Reactivity: Human, mouse, rat, chicken
Localization: Nucleus, cytoplasm
Formulation: Purified antibody in PBS pH 7.4, containing BSA and < 0.09% sodium azide (NaN3)
Storage: Store at 2°- 8°C
Applications: IHC, ICC/IF, IP, WB
Package:

| Description | Catalog No. | Size |
|-------------------------|-------------|------|
| Smoothelin Concentrated | MC0471 | 1 ml |
| Smoothelin Prediluted | MC0471RTU7 | 7 ml |

IHC Procedure*

Positive Control Tissue: Leiomyoma
Concentrated Dilution: 25-100
Pretreatment: EDTA pH8.0 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
Incubation Time and Temp: 30-60 minutes @ RT
Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human leiomyoma stained with anti-smoothelin using DAB

References:

1. Smoothelin, a new marker to determine the origin of liver fibrogenic cells. Lepreux S, et al. World J Gastroenterol. 2013 Dec 28;19(48):9343-50.
2. A study of $\alpha 5$ chain of collagen IV, caldesmon, placental alkaline phosphatase and smoothelin as immunohistochemical markers of gastrointestinal smooth muscle neoplasms. Wong NA, et al. J Clin Pathol. 2013 Sep 16.
3. Clinicopathological features of primary leiomyosarcoma of the gastrointestinal tract following recognition of gastrointestinal stromal tumours. Yamamoto H, et al. Histopathology. 2013 Aug;63(2):194-207.
4. Detection of smoothelin expression in the urinary bladder is strongly dependent on pretreatment conditions: a critical analysis with possible consequences for cancer staging. Lindh C, et al. Virchows Arch. 2011 Jun;458(6):665-70.
5. Muscularis mucosae versus muscularis propria in gallbladder, cystic duct, and common bile duct: smoothelin and desmin immunohistochemical study. Raparia K, et al. Ann Diagn Pathol. 2010 Dec;14(6):408-12.

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Rev. A