CELL MARQUE
a SIGMA-ALDRICH company

Spotlight On:

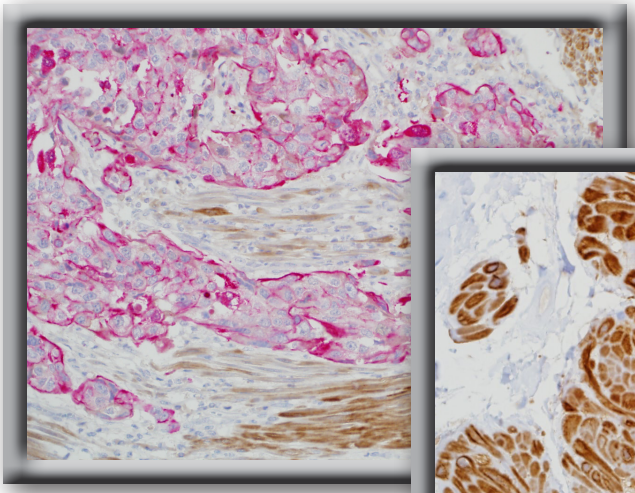
Rev. 0.1

Smoothelin (R4A)

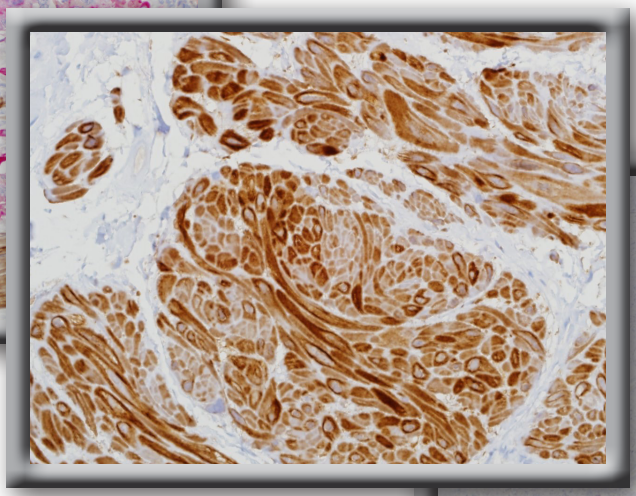
Bladder cancer affects approximately 66,000 people in the United States per year. Of these cases, 75% are men. The majority of bladder cancer cases domestically are transitional cell carcinomas, also known as urothelial carcinomas. Treatment for these malignancies can be drastically different based on the stage of the tumor, which is determined by the level of invasiveness of the tumor in relation to the smooth muscle layers of the bladder wall. Staging urothelial carcinomas can be difficult due to the varied orientation of the tissue sections from the transurethral resection in relation to the tumor, therefore a marker that can positively identify the muscularis propria and distinguish it from the muscularis mucosae can be helpful in showing the invasiveness of the tumor relative to these muscle layers. Smoothelin has shown value in this application.

Smoothelin may:

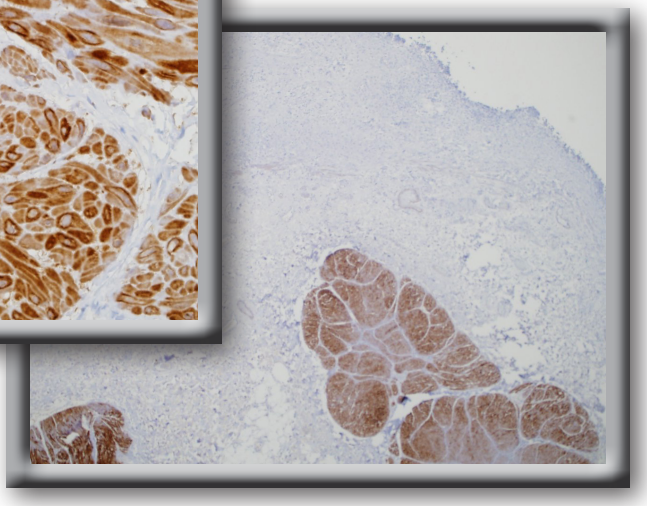
- Distinguish the muscularis propria (+) from the muscularis mucosae (-) of bladder
- Provide data that may determine clinical management
- Distinguish benign smooth muscle tumors (+) from malignant smooth muscle tumors (-) in GI tract
- Be used in a dual stain with cytokeratin OSCAR or thrombomodulin to label both the muscle layer as well as the urothelial carcinoma



Double staining of smoothelin (brown) and cytokeratin OSCAR (red). Smoothelin highlights muscularis propria of the bladder and cytokeratin OSCAR stains invasive urothelial carcinoma, suggesting high stage II carcinoma.



Anti-Smoothelin antibody strongly highlights muscularis propria of the bladder in a cytoplasmic pattern.



Smoothelin strongly stains the muscularis propria but is faint or absent in the muscularis mucosae layer.

Ordering Information:

0.1 ml concentrated.....377M-14	1 ml concentrated 377M-16	7 ml prediluted 377M-18
0.5 ml concentrated.....377M-15	1 ml prediluted 377M-17	5 Positive Control Slides..377S

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