

The special AT-rich sequence-binding protein 2 (SATB2), a nuclear matrix-associated transcription factor and epigenetic regulator, was identified as a tissue type-specific protein when screening protein expression patterns in human normal and cancer tissues using an antibody-based proteomics approach. In normal epithelial tissues, SATB2 protein was specifically expressed in the nuclei of epithelial cells in the lower GI tract. In nonepithelial cell types, SATB2 was expressed in a subset of lymphoid cells, germ cells in the testis, and certain neurons in the central nervous system. The selective expression of SATB2 in the lower GI tract suggests that SATB2 can function as a diagnostic marker for colorectal cancers⁵. SATB2 shows a distinct positivity in 85% of all colorectal cancers. SATB2 is a protein that shows nuclear staining, therefore, it has some advantages over cytoplasmic/membrane stains such as cytokeratin. The index case highlights the diagnostic value of SATB2 in a true clinical setting and stresses the important role of a new monoclonal antibody SATB2, in panel of immunohistochemical stains that can help in differential diagnosis of cervical adenocarcinomas with colonic differentiation and intestinal metastatic cervical lesion.

REFERENCES

1. Riihimäki M., Hemminki A., Sundquist J., Hemminki K: Patterns of metastasis in colon and rectal cancer. *Scientific Reports* 6, Article number: 29765(2016)
2. Raspollini P., Baroni G., Taddei A., Taddei A., Taddie G.; Primary Cervical Adenocarcinoma with intestinal differentiation and colonic carcinoma metastatic to cervix. An investigation using Cdx-2 and limited immunohistochemical panel. *Arch Pathol Lab Med.* 2003, 127:1586–1590.
3. Kummar S, Fogarasi M., Cannova A., Mota A., Ciesielski T; Cytokeratin 7 and 20 staining for the diagnosis of lung and colorectal adenocarcinoma. *Br J Cancer.* 2002 Jun 17; 86(12): 1884–1887.
4. Tendler A, Kaufman HL, Kadish AS: Increased carcinoembryonic antigen expression in cervical intraepithelial neoplasia grade 3 and in cervical squamous cell carcinoma. *Hum Pathol.* 2000 Nov;31(11):1357-62
5. Dragomir A1, de Wit M, Johansson C, Uhlen M, Pontén F. The role of SATB2 as a diagnostic marker for tumors of colorectal origin: Results of a pathology-based clinical prospective study. *Am J Clin Pathol.* 2014 May;141(5):630-8.