

Image of the Month

WT1 Immunohistochemical Expression in Renal Corpuscle

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CASE REPORT

WT1 gene encodes a transcription factor called Wilms tumour protein that plays a crucial role in the normal development of the urogenital system. The gene is mutated in a subset of patients with Wilms tumour (1, 2). Mutations of WT1 are associated with embryonic malignancies of the kidney and occurs sporadic or hereditary. Although it was considered specific, WT1 expression may be demonstrated in less than 10% of the cases with Wilms tumour (3). On the other hand, detection of mutated WT1 is important in other malignancies, like acute myeloid leukemia, serous ovarian carcinoma, and mesothelioma.

Immunohistochemical detection of WT1 protein means that the final product of reaction in nuclear-restricted, and in normal tissue is expressed by podocytes in the renal corpuscle, normal mesothelium, and epithelium of the fallopian tube. Although some authors reported cross reaction with some cytoplasmic proteins in a large spectrum of benign and malignant lesions, only the nuclear staining should be taken into account.

We show below the typical aspect of the immunohistochemical expression of WT1 in the kidney, which shows the strong reaction for podocytes and epithelial cells of the parietal layer of the renal corpuscle capsule (Fig.1). We believe that renal corpuscle expression of WT1 is the best inner/outer positive control for this immunohistochemical method.

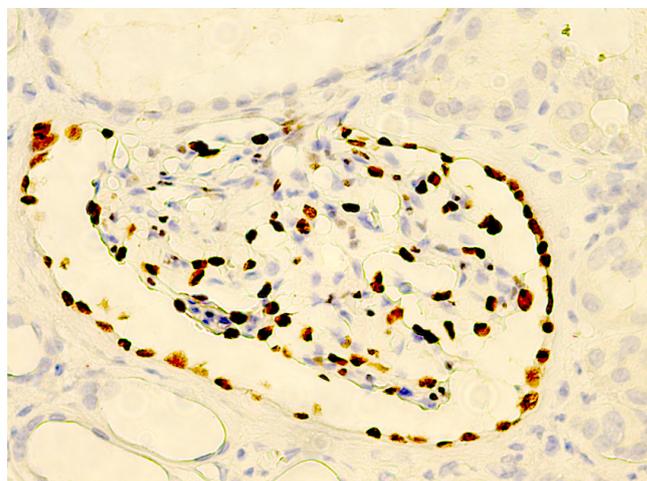


Fig. 1. WT1 immunohistochemical expression in the renal corpuscle. Note the strong positive reaction in the nuclei of podocytes and epithelial cells of the parietal layer. Original magnification x400

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