10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Wilm's Tumor 1 (WT1) (Wilm's Tumor & Mesothelial Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM361]
Catalog # AH12527

Product Information

Application	IF, FC, IHC-P
Primary Accession	P19544
Other Accession	7490, 591980
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SPM361
Calculated MW	49188

Additional Information

Gene ID	7490
Other Names	Wilms tumor protein, WT33, WT1
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Wilm's Tumor 1 (WT1) (Wilm's Tumor & Mesothelial Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	WT1
Function	Transcription factor that plays an important role in cellular development and cell survival (PubMed:7862533). Recognizes and binds to the DNA sequence 5'-GCG(T/G)GGGCG-3' (PubMed:17716689, PubMed:25258363, PubMed:7862533). Regulates the expression of numerous target genes, including EPO. Plays an essential role for development of the urogenital system. It has a tumor suppressor as well as an oncogenic role in tumor formation. Function may be isoform-specific: isoforms lacking the KTS motif may act as transcription factors (PubMed:15520190). Isoforms containing the KTS motif may bind mRNA and play a role in mRNA metabolism or splicing (PubMed:16934801). Isoform 1 has lower affinity for DNA, and can bind RNA (PubMed:19123921).

Cellular Location	Nucleus. Nucleus, nucleolus. Cytoplasm. Note=Isoforms lacking the KTS motif have a diffuse nuclear location (PubMed:15520190). Shuttles between nucleus and cytoplasm. {ECO:0000250, ECO:0000269|PubMed:15520190} [Isoform 4]: Nucleus, nucleoplasm
Tissue Location	Expressed in the kidney and a subset of hematopoietic cells

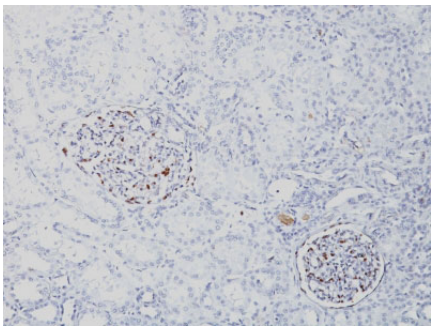
Background

Recognizes a 47-55kDa-tumor suppressor protein, identified as Wilm's Tumor (WT1) protein. The antibody reacts with all isoforms of the full-length WT1 and also identifies WT1 lacking exon 2-encoded amino acids, frequently found in subsets of sporadic Wilm s tumors. WT1, a sporadic and familial pediatric kidney tumor, is genetically heterogeneous. Wilm s tumor is associated with mutations of WT1, a zinc-finger transcription factor that is essential for the development of the metanephric kidney and the urogenital system. The WT1 gene is normally expressed in fetal kidney and mesothelium, and its expression has been suggested as a marker for Wilm s tumor and mesothelioma. WT1 protein has been identified in proliferative mesothelial cells, malignant mesothelioma, ovarian carcinoma, gonadoblastoma, nephroblastoma, and desmoplastic small round cell tumor. Lung adenocarcinomas rarely stain positive with this antibody. WT1 protein expression in mesothelial cells has become a reliable marker for the diagnosis of mesotheliomas.

References

Rauscher JF, Morris JF, Fredericks WJ, Lopez-Guisa J, Balakrishnan C, Jost M, Herlyn M, Rodeck U. Characterization of monoclonal antibodies directed to the amino-terminus of the WT1, Wilms; tumor suppressor protein. Hybridoma 1998; 17:191 |

Images



Formalin-fixed, paraffin-embedded human Fetal Kidney stained with WT1 Monoclonal Antibody (SPM361).