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WT1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1982a

Product Information

Application	WB, FC, E
Primary Accession	P19544
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5G11A5
Isotype	IgG1
Calculated MW	49188
Description	This gene encodes a transcription factor that contains four zinc-finger motifs at the C-terminus and a proline/glutamine-rich DNA-binding domain at the N-terminus. It has an essential role in the normal development of the urogenital system, and it is mutated in a small subset of patients with Wilm's tumors. This gene exhibits complex tissue-specific and polymorphic imprinting pattern, with biallelic, and monoallelic expression from the maternal and paternal alleles in different tissues. Multiple transcript variants have been described. In several variants, there is evidence for the use of a non-AUG (CUG) translation initiation site upstream of and in-frame with the first AUG. Authors of PMID:7926762 also provide evidence that WT1 mRNA undergoes RNA editing in human and rat, and that this process is tissue-restricted and developmentally regulated.
Immunogen	Purified recombinant fragment of human WT1 (AA: 314-479) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	7490
Other Names	Wilms tumor protein, WT33, WT1
Dilution	WB~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	WT1 Antibody 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

There are at least four distinct but related alkaline phosphatases: intestinal, placental, placental-like, and liver/bone/kidney (tissue non-specific). The intestinal alkaline phosphatase gene encodes a digestive brush-border enzyme. This enzyme is upregulated during small intestinal epithelial cell differentiation.

References

1. Leuk Res. 2013 Oct;37(10):1341-9. 2. Pediatr Blood Cancer. 2013 Aug;60(8):1388-9.

Images

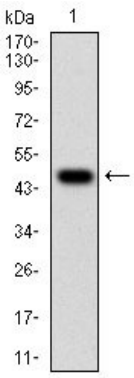
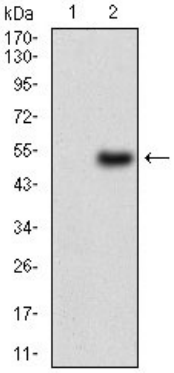


Figure 1: Western blot analysis using WT1 mAb against human WT1 (AA: 314-479) recombinant protein. (Expected MW is 47.6 kDa)

Figure 2: Western blot analysis using WT1 mAb against HEK293 (1) and WT1 (AA: 314-479)-hIgGFc transfected HEK293 (2) cell lysate.



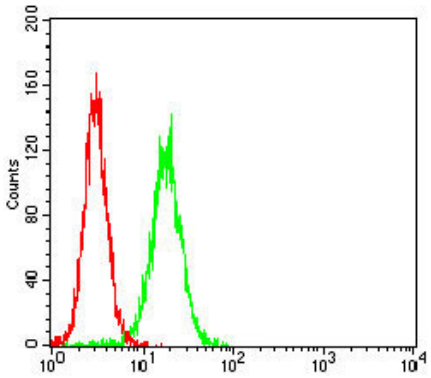


Figure 3: Flow cytometric analysis of Hela cells using WT1 mouse mAb (green) and negative control (red).

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