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WT1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1982a

Specification

WT1 Antibody - Product Information

Application	**E, WB, FC**
Primary Accession	P19544
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**49.2kDa KDa**

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.

WT1 Antibody - Additional Information

Gene ID 7490

Other Names
Wilms tumor protein, WT33, WT1

Dilution
E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400

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.

WT1 Antibody - 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

WT1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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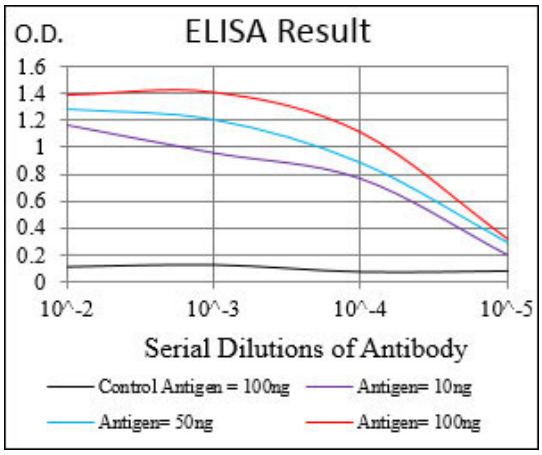

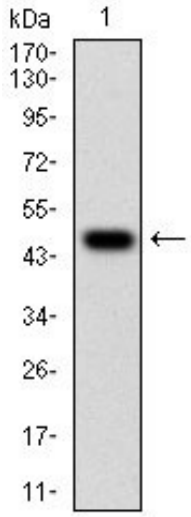

Figure 1: Western blot analysis using WT1 mAb against human WT1 (AA: 314-479) recombinant protein. (Expected MW is 47.6 kDa)

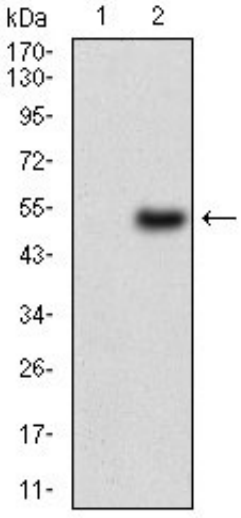

Figure 2: Western blot analysis using WT1 mAb against HEK293 (1) and WT1 (AA: 314-479)-hIgGFc transfected HEK293 (2) cell lysate.

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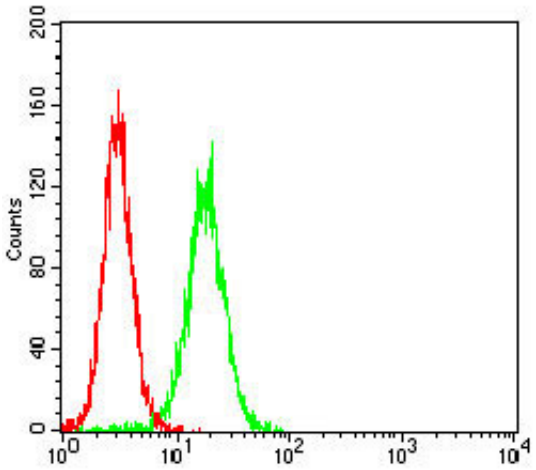

Figure 3: Flow cytometric analysis of Hela cells using WT1 mouse mAb (green) and negative control (red).

WT1 Antibody - 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.

WT1 Antibody - References

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