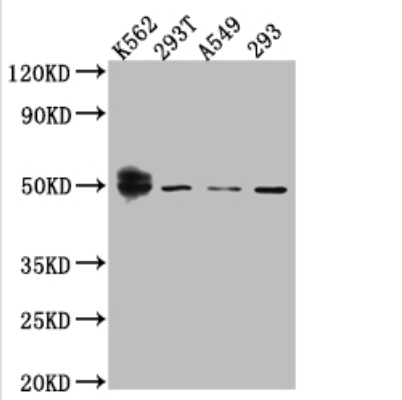
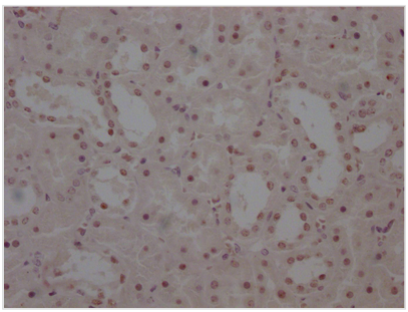
WT1 Recombinant Monoclonal Antibody

Product Code	CSB-RA950156A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P19544
Immunogen	A synthesized peptide derived from human Wilms Tumor Protein
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	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:7862533, PubMed:17716689, PubMed:25258363). 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).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Developmental biology; Tags & Cell Markers
Gene Names	WT1
Clone No.	5F2
Image	



Western Blot
Positive WB detected in: K562 whole cell lysate, 293T whole cell lysate, A549 whole cell lysate, HEK293 whole cell lysate
All lanes: Wilms Tumor Protein antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 50, 48, 48, 49, 35, 57, 56, 34 kDa
Observed band size: 50 kDa



IHC image of CSB-RA950156A0HU diluted at 1:100 and staining in paraffin-embedded human kidney tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The WT1 recombinant monoclonal antibody is produced through a four-step process. First, the WT1 monoclonal antibody gene is sequenced, and then the gene is cloned into a plasmid vector. Next, the recombinant vector is introduced into a host cell line. The WT1 recombinant monoclonal antibody is then purified from the cell culture supernatant using affinity chromatography, followed by testing and characterizing the purified antibody. The WT1 monoclonal antibody is developed using a synthesized peptide derived from human WT1 as the immunogen. This WT1 recombinant monoclonal antibody is suitable for detecting human WT1 protein using ELISA, WB, and IHC applications.

The WT1 is a transcription factor that plays an important role in the development and function of various tissues in the body, particularly in the formation and function of the kidneys and gonads. In the kidneys, WT1 is involved in the development of the nephrons, which are the functional units of the kidneys responsible for filtering blood and producing urine. In the gonads, WT1 is involved in the development of the testes and ovaries and is required for the proper differentiation and function of the Sertoli cells in the testes and granulosa cells in the ovaries. WT1 has also been shown to play a role in the regulation of gene expression, cell proliferation, and apoptosis in various tissues, including the kidney, gonads, and hematopoietic systems. Abnormal expression or mutations in the WT1 gene have been associated with a variety of diseases, including Wilms tumor, Denys-Drash syndrome, and Frasier syndrome.