abcam

ab202639

Alexa Fluor® 647 Anti-Wilms Tumor Protein antibody [CAN-R9(IHC)-56-2]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	CAN-R9(IHC)-56-2
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	This product gave a positive signal in HepG2 cells fixed with 4% formaldehyde (10 min).

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Rat
Dilution info	1/50
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Wilms Tumor Protein commonly known as WT1 is a critical transcription factor implicated in several cellular processes. It is also identified by other names such as Wilms Tumor Suppressor and WT33. WT1 protein has a mass of approximately 52-54 kDa. It is broadly expressed in various tissues with high levels in the developing kidney gonads and certain mesothelial tissues. Its expression plays an important role in organ development and cellular differentiation.
Biological function summary	The WT1 protein regulates gene expression by binding to specific DNA sequences influencing cell growth and differentiation. WT1 acts as a part of larger protein complexes interacting with other transcription factors and co-regulators. It plays essential roles in the development of the urogenital system and in the maintenance of mesothelial cells. The WT1 protein is essential for normal kidney and gonadal development highlighting its significance in embryogenesis.
Pathways	WT1 integration involves multiple cellular signaling cascades. It is notably engaged in the Wnt and PI3K/AKT signaling pathways which are critical for cell proliferation and survival. In these pathways WT1 interaction with proteins such as β-catenin and PI3K subunits modulates cell fate decisions. This involvement in signaling networks exemplifies its importance in cellular homeostasis and response to environmental cues.
Associated diseases and disorders	WT1 mutations or dysregulation associate strongly with specific pathologies particularly Wilms tumor and acute myeloid leukemia (AML). In Wilms tumor WT1 acts as a tumor suppressor gene and its loss of function leads to tumorigenesis in the kidney. In AML aberrant WT1 expression affects normal hematopoiesis and is often linked to poor prognosis. Interaction with proteins like BSA in immunohistochemistry diagnostics highlights WT1’s significance as a biomarker for these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

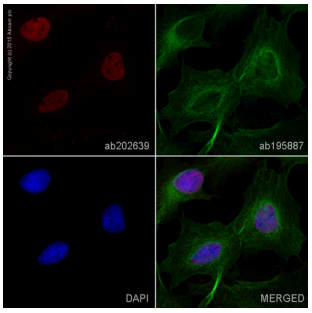
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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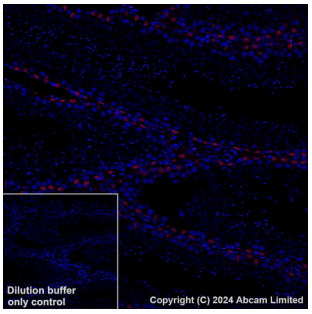
4 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-Wilms Tumor Protein antibody [CAN-R9(IHC)-56-2] (ab202639)

Wilms Tumor Protein Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Wilms Tumor Protein antibody

ab202639 staining Wilms Tumor Protein in HepG2 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab202639 at 1/200 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



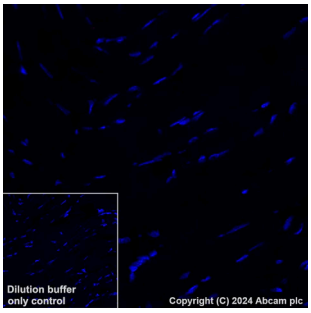
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-Wilms Tumor Protein antibody [CAN-R9(IHC)-56-2] (ab202639)

Immunohistochemical analysis of paraffin-embedded rat testis labeling Wilms Tumor Protein with ab202639 at 1/50 dilution.

Positive staining on rat testis.
The section was incubated with ab202639 for 60 mins at room temperature (shown in red).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

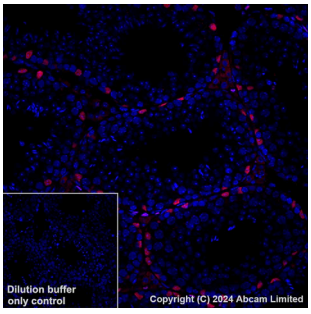


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-Wilms Tumor Protein antibody [CAN-R9(IHC)-56-2] (ab202639)

Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle labeling Wilms Tumor Protein with ab202639 at 1/50 dilution.

Negative control: no staining on mouse skeletal muscle.
The section was incubated with ab202639 for 60 mins at room temperature (shown in red).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-Wilms Tumor Protein antibody [CAN-R9(IHC)-56-2] (ab202639)

Immunohistochemical analysis of paraffin-embedded mouse testis labeling Wilms Tumor Protein with ab202639 at 1/50 dilution.

Positive staining on mouse testis.
The section was incubated with ab202639 for 60 mins at room temperature (shown in red).
Nuclear DNA was labeled with DAPI (shown in blue).
The section was then mounted using Fluoromount®.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.