abcam

ab242423

Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP320
Purification technique	Affinity purification Protein A/G
Concentration	1.013 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	Perform heat mediated antigen retrieval with EDTA buffer pH 8 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat mediated antigen retrieval with EDTA buffer pH 8 before commencing with IHC staining protocol.

Species	Human
Dilution info	-
Notes	Perform heat mediated antigen retrieval with EDTA buffer pH 8 before commencing with IHC staining protocol.

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab242423 is the carrier-free version of ab224801.
What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

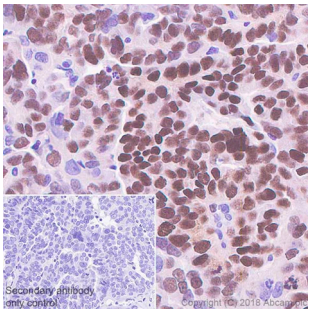
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:

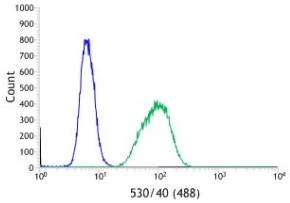
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Wilms Tumor Protein antibody

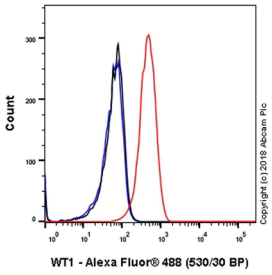
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human ovarian carcinoma tissue sections labeling Wilms Tumor Protein with ab224801 at 1/100 dilution (3.58 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10 mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224801)



Flow Cytometry (Intracellular) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Flow Cytometry (Intracellular) staining using rabbit Anti-Wilms Tumor Protein antibody

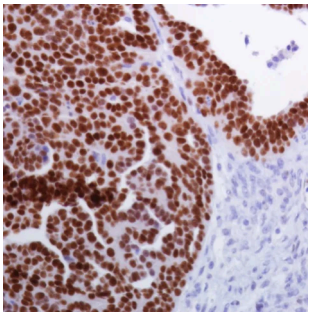
Flow cytometric analysis of K652 (human chronic myelogenous leukemia cell line from bone marrow) cells labeling Wilms Tumor Protein with ab224801 at 1/100 dilution (green) compared with a rabbit IgG negative control (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab224801).



Flow Cytometry (Intracellular) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Flow Cytometry (Intracellular) staining using rabbit Anti-Wilms Tumor Protein antibody

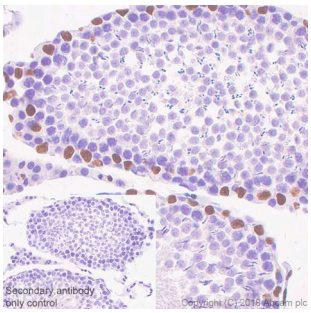
Flow Cytometry analysis of K-562 (human chronic myelogenous leukemia lymphoblast) cells labeling Wilms Tumor Protein with purified ab224801 at 1:20 dilution (11.93 µg/ml) - Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) - Black. Unlabeled control - Blue.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab242423)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Wilms Tumor Protein antibody

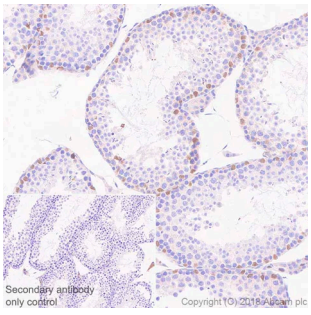
Formalin-fixed, paraffin-embedded human ovarian adenocarcinoma tissue stained for Wilms Tumor Protein using ab224801 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab224801).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Wilms Tumor Protein antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat testis tissue sections labeling Wilms Tumor Protein with ab224801 at 1/100 dilution (3.58 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10 mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224801)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Wilms Tumor Protein antibody [SP320] - BSA and Azide free (ab242423)

Wilms Tumor Protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Wilms Tumor Protein antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse testis tissue sections labeling Wilms Tumor Protein with ab224801 at 1/400 dilution (0.90 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10 mins. Goat Anti-Rabbit & Mouse IgG (HRP) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224801)

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