abcam

ab178410

Anti-WDR5 antibody [EPR11350] - C-terminal

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR11350
Purification technique	Affinity purification Protein A
Concentration	0.364 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

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

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/5000
Notes	-

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/5000
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information WDR5

Function

Contributes to histone modification (PubMed:16600877, PubMed:16829960, PubMed:19103755, PubMed:19131338, PubMed:19556245, PubMed:20018852). May position the N-terminus of histone H3 for efficient trimethylation at 'Lys-4' (PubMed:16829960). As part of the MLL1/MLL complex it is involved in methylation and dimethylation at 'Lys-4' of histone H3 (PubMed:19556245). H3 'Lys-4' methylation represents a specific tag for epigenetic transcriptional activation (PubMed:18840606). As part of the NSL complex it may be involved in acetylation of nucleosomal histone H4 on several lysine residues (PubMed:19103755, PubMed:20018852). May regulate osteoblasts differentiation (By similarity). In association with RBBP5 and ASH2L, stimulates the histone methyltransferase activities of KMT2A, KMT2B, KMT2C, KMT2D, SETD1A and SETD1B (PubMed:21220120, PubMed:22266653).

Storage

Shipped at conditions	Conditional Ambient
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

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.

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.

Supplementary info

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

Activity summary	WDR5 also known as WD repeat domain 5 is an important component in the regulation of gene expression. It has a molecular mass of approximately 36 kDa. This protein is widely expressed across various tissues with significant expression in the nucleus. WDR5 primarily functions as a scaffolding protein facilitating the assembly of multiprotein complexes that modify chromatin structure and function. Its involvement in chromatin regulation highlights its mechanical role in modulating access to DNA for transcriptional machinery.
Biological function summary	WDR5 plays a significant role in epigenetic regulation by being part of the histone methyltransferase complex associated with MLL (Mixed Lineage Leukemia). This complex is responsible for the methylation of histone H3 at lysine 4 (H3K4) an essential modification for transcriptional activation. WDR5's interaction with MLL complex components influences gene expression importantly during development and cellular differentiation. Its presence in the MLL complex connects it to pathways that govern cell cycle regulation and stem cell maintenance.
Pathways	WDR5 functions within key pathways such as the chromatin modification pathway and the WNT signaling pathway. In these settings WDR5 interacts with proteins like MLL and BRG1 which contribute to its role in gene regulation and chromatin remodeling. Through these interactions WDR5 modulates the transcription of target genes impacting cellular processes like proliferation and differentiation.

Associated diseases and disorders	WDR5 has shown involvement in certain cancers and neurodevelopmental disorders. Its dysregulation is linked to leukemia specifically in cases where MLL rearrangements alter its normal function. Additionally aberrant expression of WDR5 may influence neurodevelopmental disorders though its precise role requires more research. In the context of leukemia WDR5's interaction with proteins such as DOT1L and MEN1 supports the proliferation of leukemic cells. Understanding the involvement of WDR5 in these conditions can offer insights into therapeutic targets for disease intervention.

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

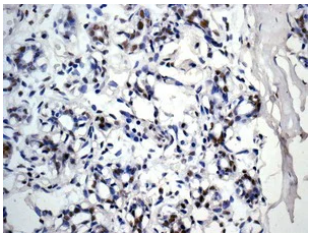
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

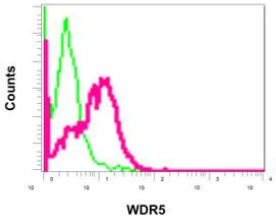
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

WDR5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WDR5 antibody

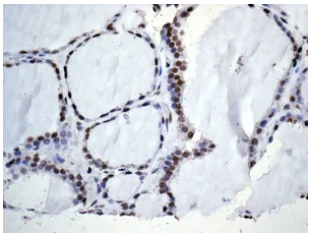
Immunohistochemical analysis of paraffin embedded Human breast tissue labeling WDR5 with ab178410 at 1/50.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

WDR5 Flow Cytometry (Intracellular) staining using rabbit Anti-WDR5 antibody

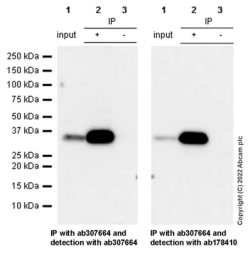
Intracellular flow cytometrical analysis of permeabilized HeLa cells labeling WDR5 with ab178410 at 1/10 (red) compared to a nonspecific negative control antibody (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

WDR5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WDR5 antibody

Immunohistochemical analysis of paraffin embedded Human thyroid gland tissue labeling WDR5 with ab178410 at 1/50.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

WDR5 was immunoprecipitated from 0.35 mg U937 whole cell lysate with ab307664 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab307664 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: U937 (human histiocytic lymphoma monocyte) whole cell lysate Lane 2: ab307664 IP in U937 whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab307664 in U937 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 24 seconds The IP experiment was performed by ab307664 using U937 cells. On the left the IP blot was probed with ab307664 and on the right the blot was probed by another anti-WDR5 antibody (ab178410)(1:1000 dilution).
Lane 2:
Immunoprecipitation - Anti-WDR5 antibody [EPR27033-6] (ab307664) at 1/30 dilution

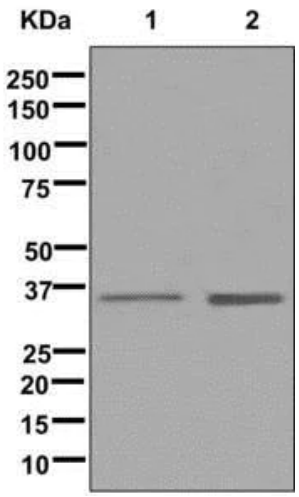
Lane 2:
Immunoprecipitation - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410) at 1/1000 dilution

All lanes:
U937 (human histiocytic lymphoma monocyte) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 24s



Western blot - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

All lanes:
Western blot - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

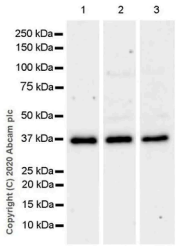
Lane 2:
Saos-2 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 36 kDa

Observed band size: 36 kDa



Western blot - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410)

All lanes:
Western blot - Anti-WDR5 antibody [EPR11350] - C-terminal (ab178410) at 1/1000 dilution

Lane 1:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate at 20 µg

Lane 2:
Mouse spleen tissue lysate at 20 µg

Lane 3:
Rat spleen tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 36 kDa

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