abcam

ab126730

Anti-DDX5 antibody [EPR7239]

Recombinant | RabMAb | KO Validated

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	EPR7239
Purification technique	Affinity purification Protein A
Concentration	0.17 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Expected

Species	Mouse
Dilution info	-
Notes	-

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/10 - 1/100
Notes	-

Expected

Species	Human
Dilution info	-
Notes	-

Species	Rat
Dilution info	1/10 - 1/100
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Mouse
Dilution info	-
Notes	-

Species	Rat
Dilution info	1/250 - 1/500
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Mouse
Dilution info	-
Notes	-

Species	Rat
Dilution info	1/100 - 1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information DDX5

Function	Involved in the alternative regulation of pre-mRNA splicing; its RNA helicase activity is necessary for increasing tau exon 10 inclusion and occurs in a RBM4-dependent manner. Binds to the tau pre-mRNA in the stem-loop region downstream of exon 10. The rate of ATP hydrolysis is highly stimulated by single-stranded RNA. Involved in transcriptional regulation; the function is independent of the RNA helicase activity. Transcriptional coactivator for androgen receptor AR but probably not ESR1. Synergizes with DDX17 and SRA1 RNA to activate MYOD1 transcriptional activity and involved in skeletal muscle differentiation. Transcriptional coactivator for p53/TP53 and involved in p53/TP53 transcriptional response to DNA damage and p53/TP53-dependent apoptosis. Transcriptional coactivator for RUNX2 and involved in regulation of osteoblast differentiation. Acts as a transcriptional repressor in a promoter-specific manner; the function probably involves association with histone deacetylases, such as HDAC1. As component of a large PER complex is involved in the inhibition of 3' transcriptional termination of circadian target genes such as PER1 and NR1D1 and the control of the circadian rhythms.

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	Stable for 12 months at -20°C

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	DDX5 also known as DEAD-box helicase 5 or p68 is an RNA helicase important to various RNA processing tasks. With a molecular mass of approximately 68 kDa DDX5 unwinds RNA secondary structures using energy from ATP hydrolysis. It expresses widely in human tissues with higher levels observed in regions of active cellular proliferation. The expression pattern reflects its significant involvement in pathways that require dynamic RNA structure modifications.
Biological function summary	The function of DDX5 facilitates RNA splicing transcription and ribosome biogenesis. DDX5 is a component of various RNA processing complexes interacting with other proteins to modify pre-mRNA and other RNA molecules. It plays a role in modulating gene expression and ensuring the proper processing of precursor RNA transcripts. This makes DDX5 important in cellular differentiation and development influencing stem cell renewal and pluripotency.
Pathways	DDX5 participates in the Wnt/β-catenin and p53 signaling pathways. In the Wnt/β-catenin pathway DDX5 interacts with proteins such as β-catenin to influence gene transcription involved in cell growth and differentiation. Within the p53 pathway DDX5 modulates the activity of p53 a protein known for its role in DNA damage response and apoptosis. These interactions position DDX5 at the intersection of multiple regulatory networks that govern cellular proliferation and survival.
Associated diseases and disorders	Aberrant DDX5 expression links to cancer and neurodegenerative diseases. Overexpression or dysregulation of DDX5 has been observed in various cancers including breast cancer where it can interact with proteins such as estrogen receptor alpha promoting tumor progression. In neurodegenerative disorders particularly amyotrophic lateral sclerosis (ALS) DDX5 forms toxic aggregates with TDP-43 a protein important in RNA binding and processing. Understanding DDX5's involvement in these diseases offers insight into potential therapeutic targets and diagnostic markers.

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

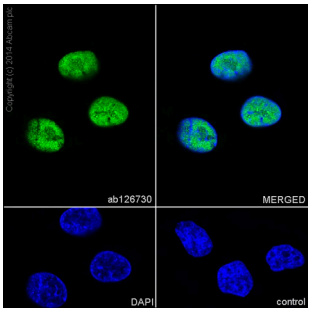
We do not recommend this combination. It is not covered by our product promise.

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.

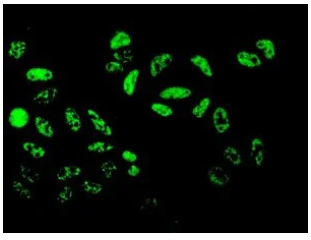
8 product images



Immunocytochemistry/ Immunofluorescence - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DDX5 antibody

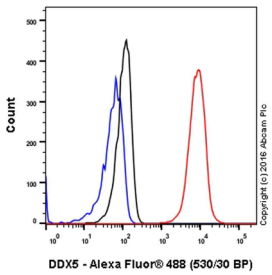
Immunocytochemistry/Immunofluorescence analysis of SH-SY5Y (human neuroblastoma) cells labelling DDX5 (green) with purified ab126730 at 1/250. Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as a nuclear counterstain.
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.



Immunocytochemistry/ Immunofluorescence - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DDX5 antibody

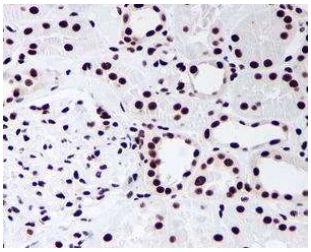
ab126730, at a dilution of 1/100, staining DDX5 in HeLa cells by Immunofluorescence.



Flow Cytometry (Intracellular) - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Flow Cytometry (Intracellular) staining using rabbit Anti-DDX5 antibody

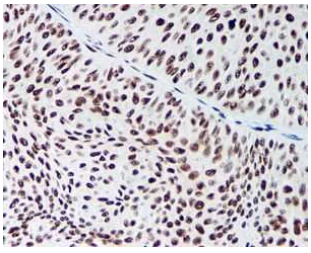
ab126730 staining DDX5 in the human cell line HeLa (Human cervix adenocarcinoma epithelial cell) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde, permeabilised with 90% methanol and the sample was incubated with the primary antibody at a dilution of 1/200. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black) Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-DDX5 antibody

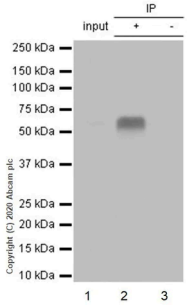
ab126730, at a dilution of 1/250, staining DDX5 in paraffin-embedded Human kidney tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-DDX5 antibody

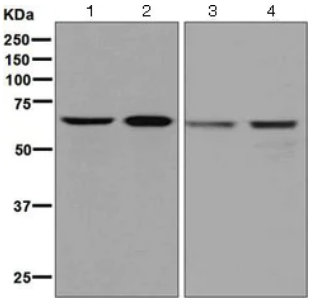
ab126730, at a dilution of 1/250, staining DDX5 in paraffin-embedded Human bladder carcinoma tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-DDX5 antibody [EPR7239] (ab126730)

Purified ab126730 at 1/20 dilution (1µg) immunoprecipitating DDX5 in Mouse brain lysate.
Lane 1 (input): Mouse brain lysate 10µg
Lane 2 (+): ab126730 + Mouse brain lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab126730 in Mouse brain lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/20,000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 69 kDa
All lanes:
Immunoprecipitation - Anti-DDX5 antibody [EPR7239] (ab126730)

Predicted band size: 69 kDa



Western blot - Anti-DDX5 antibody [EPR7239] (ab126730)

All lanes:
Western blot - Anti-DDX5 antibody [EPR7239] (ab126730) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
SH-SY5Y cell lysate at 10 µg

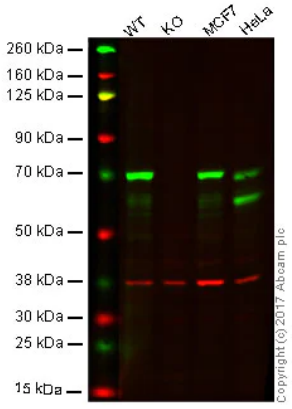
Lane 3:
A431 cell lysate at 10 µg

Lane 4:
HT29 cell lysate at 10 µg

Secondary

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

Predicted band size: 69 kDa



Western blot - Anti-DDX5 antibody [EPR7239] (ab126730)

DDX5 Western blot staining using rabbit Anti-DDX5 antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: DDX5 knockout HAP1 whole cell lysate (20 µg)
Lane 3: MCF7 whole cell lysate (20 µg)
Lane 4: HeLa whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab126730 observed at 69 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab126730 was shown to specifically react with DDX5 in wild-type cells as signal was lost in DDX5 knockout cells. Wild-type and DDX5 knockout samples were subjected to SDS-PAGE. ab126730 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/10000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-DDX5 antibody [EPR7239] (ab126730)

Predicted band size: 69 kDa

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