abcam

ab251269

Anti-DR5 antibody [EPR19310] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR19310
Purification technique	Affinity purification Protein A
Concentration	1.031 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Expected

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

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Expected

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

Flow Cyt (Intra)

Expected

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

Target data

See full target information TNFRSF10B

Function	Receptor for the cytotoxic ligand TNFSF10/TRAIL (PubMed:10549288). The adapter molecule FADD recruits caspase-8 to the activated receptor. The resulting death-inducing signaling complex (DISC) performs caspase-8 proteolytic activation which initiates the subsequent cascade of caspases (aspartate-specific cysteine proteases) mediating apoptosis. Promotes the activation of NF-kappa-B. Essential for ER stress-induced apoptosis.

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

ab251269 is the carrier-free version of ab199357.

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.

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	DR5 also known as Death Receptor 5 TRAIL-R2 or TNFRSF10B is a protein critical in apoptosis. It is a transmembrane receptor with a mass of approximately 54 kDa. Researchers find it expressed mostly in tissues such as lung colon and prostate. DR5 functions by binding to its ligand TRAIL triggering the extrinsic apoptotic pathway. Through this mechanism DR5 initiates a cascade of caspase activation that leads to cell death.

Biological function summary	DR5 plays a significant role in the regulation of apoptosis particularly in cancer cells. It is a component of the TRAIL receptor complex which includes several other death receptors like DR4. This complex formation allows DR5 to mediate apoptotic signals more efficiently. By controlling apoptosis DR5 helps maintain tissue homeostasis and prevents abnormal cell proliferation.
Pathways	DR5 is an important part of the TRAIL signaling pathway and the extrinsic apoptosis pathway. It connects with proteins like FADD and Caspase-8 essential in the apoptotic signaling cascade. By interacting with these proteins DR5 drives the progression of the apoptotic signal ensuring the removal of dysfunctional cells. Such pathways are vital for restraining tumor development and progression.
Associated diseases and disorders	DR5 exhibits significant relevance to cancer and autoimmune diseases. Its ability to induce apoptosis through the TRAIL pathway keeps oncogenic transformations in check. In cancer DR5 often interfaces with other proteins like Bcl-2 which are involved in cell survival. Furthermore defects or aberrant expressions in DR5 have associations with autoimmune disorders where excessive cell death or survival contributes to disease pathology. DR5's role in these conditions makes it a promising target in therapeutic strategies.

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

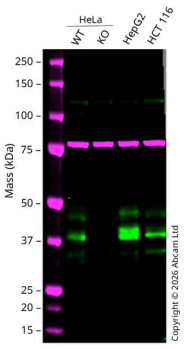
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Western blot - Anti-DR5 antibody [EPR19310] - BSA and Azide free (ab251269)

DR5 Western blot staining using rabbit Anti-DR5 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab199357).

Western blot: Anti-DR5 antibody [EPR19310] ab199357 staining at 1/1000 dilution, shown in green; Mouse anti-CANX ab238078 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 37-50 kDa in Wild-type HeLa cell lysates with no signal observed at this size in TNFRSF10B knockout HeLa cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5% Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-DR5 antibody [EPR19310] (ab199357) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysates at 20 µg

Lane 2:
Western blot - Human TNFRSF10B (DR5) knockout HeLa cell line (ab264922) at 20 µg

Lane 3:
HepG2 cell lysates at 20 µg

Lane 4:
HCT 116 cell lysates at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 47 kDa

Observed band size: 37-50 kDa

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