abcam

ab321972

Anti-DR5 antibody [EPR28153-84]

Anti-DR5 antibody [EPR28153-84] is a Rabbit Monoclonal antibody that is used in DR5 Flow Cytometry (Intra), Western Blot. Suitable for Mouse samples.

TARGET: DR5 (TNFRSF10B) is a pro-apoptotic death receptor for the TRAIL protein, which induces cell death. Five TRAIL receptors have been identified, however only two, DR4 and DR5 contain the death domain and have been identified as promising targets for cancer treatment. TRAIL. Mouse DR5 has similar function to human DR4 and DR5, and is studied in mouse tumor models exploring TRAIL therapies and resistance mechanisms.

Recombinant | RabMAb | 20ul selling size

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	EPR28153-84
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse tissue.
Concentration	0.515 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

ICC/IF

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Tnfrsf10b

Function	Receptor for the cytotoxic ligand TNFSF10/TRAIL. 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	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	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

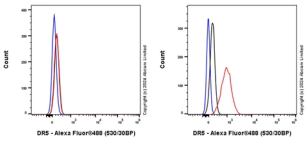
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



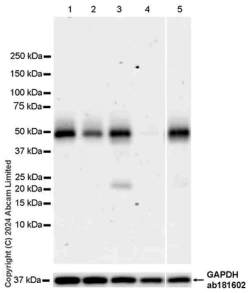
Flow Cytometry (Intracellular) - Anti-DR5 antibody [EPR28153-84] (ab321972)

DR5 Flow Cytometry (Intracellular) staining using rabbit Anti-DR5 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Neuro-2a (mouse neuroblastoma neuroblast Left) / NIH/3T3 (mouse embryonic fibroblast Right) cells labelling DR5 with ab321972 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488 ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: Neuro-2a



Western blot - Anti-DR5 antibody [EPR28153-84] (ab321972)

DR5 Western blot staining using rabbit Anti-DR5 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: Neuro-2a

This blot was developed using a high sensitivity ECL substrate.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-DR5 antibody [EPR28153-84] (ab321972) at 1/1000 dilution

Lane 1:
NIH/3T3 (mouse embryonic fibroblast) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:
NIH/3T3 transfected with siRNA specifically targeting DR5 whole cell lysate at 20 µg

Lane 3:
C2C12 (mouse myoblast) whole cell lysate at 20 µg

Lane 4:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Lane 5:
MEF (mouse embryo fibroblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 42 kDa, 36 kDa

Exposure time: 103s

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