abcam

ab166650

Anti-DR5 antibody [DR5-01-1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Fusion protein corresponding to TNFRSF10B, fused to IGG1_HUMAN and to TNFRSF10B. The exact immunogen used to generate this antibody is proprietary information. Database link O14763
Clone number	DR5-01-1
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-10 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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

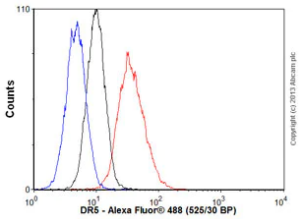
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - Anti-DR5 antibody [DR5-01-1] (ab166650)

DR5 Flow Cytometry staining using mouse Anti-DR5 antibody

Overlay histogram showing HeLa cells stained with ab166650 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab166650, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was

also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

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