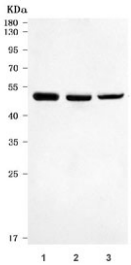
Death Receptor 5 Antibody / DR5 Rabbit Polyclonal Antibody (RQ7874)

Catalog No.	Formulation	Size
RQ7874	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9QZM4
Applications	Western blot: 0.5-1ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This Death Receptor 5 Antibody / DR5 Rabbit Polyclonal Antibody is available for research use only.



Death Receptor 5 Antibody WB Analysis of Rat Brain, Mouse Brain and NIH 3T3 Cell Lysates. Western blot analysis of rat brain (lane 1), mouse brain (lane 2), and mouse NIH 3T3 cell lysates (lane 3) using DR5 Rabbit Polyclonal Antibody. An immunoreactive band is detected at approximately 48 kDa in all three samples, consistent with the predicted molecular weight of the DR5 precursor.

Description

Death Receptor 5 Antibody / DR5 Rabbit Polyclonal Antibody targets death receptor 5 (DR5), a member of the tumor necrosis factor receptor superfamily involved in the regulation of programmed cell death. In humans, DR5 is encoded by TNFRSF10B and is also known as TRAIL receptor 2 (TRAILR2), CD262, and KILLER. DR5 belongs to a group of receptors that recognize tumor necrosis factor-related apoptosis-inducing ligand (TRAIL), a cytokine involved in immune surveillance and the elimination of damaged or abnormal cells. Unlike decoy TRAIL receptors, functional death receptors contain intracellular signaling domains capable of initiating apoptotic responses.

Death receptors possess extracellular cysteine-rich domains that participate in ligand recognition, a transmembrane segment, and an intracellular death domain. Ligand engagement promotes receptor clustering and recruitment of adaptor proteins, particularly FADD, which participates in assembly of the death-inducing signaling complex (DISC). This complex recruits initiator procaspases, including procaspase-8, leading to activation of downstream apoptotic signaling. Activated caspase-8 can stimulate executioner caspases directly or cleave BID to engage mitochondrial pathways that amplify the apoptotic response. These events contribute to the orderly elimination of cells through programmed cell death.

Death receptor signaling is influenced by receptor abundance, intracellular trafficking, post-translational modifications, and the balance of pro-apoptotic and anti-apoptotic proteins. Cellular stress can alter the expression and activity of TRAIL receptors, while regulatory proteins such as CFLAR influence the efficiency of caspase activation. Depending on cellular context, receptor engagement may also activate non-apoptotic pathways involving NF-kappaB and MAP kinases. These responses can influence inflammation, cellular survival, and interactions with the surrounding tissue environment.

DR5 and related TRAIL receptors have attracted considerable attention in cancer biology because their activation can promote apoptosis in susceptible malignant cells. However, resistance may develop through impaired caspase activation, altered receptor localization, or increased anti-apoptotic signaling. Comparative studies of TRAIL receptor biology are also important because receptor organization and gene relationships differ among mammals. Death Receptor 5 Antibody supports investigations of death receptor expression, apoptotic signaling, cellular stress responses, and mechanisms regulating sensitivity to TRAIL-mediated cell death.

For an alternative monoclonal antibody targeting this apoptosis-regulating receptor, see our DR5 Antibody DR5/3381, validated for immunohistochemistry and supported by human protein microarray specificity analysis.

Application Notes

Optimal dilution of the Death Receptor 5 Antibody / DR5 Rabbit Polyclonal Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant mouse protein (amino acids Q63-A174) was used as the immunogen for the Death receptor 5 antibody.

Storage

After reconstitution, the Death receptor 5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

DR5 antibody, TRAIL death receptor antibody, TRAIL receptor antibody, Mouse TRAIL receptor antibody, TRAIL-R antibody, TNF-related apoptosis-inducing ligand receptor antibody, TNF receptor superfamily member 10 antibody, Death domain-containing TRAIL receptor antibody, Apoptosis-inducing death receptor antibody

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