

Product Information

Anti-DR4, N-terminal

produced in rabbit, IgG fraction of antiserum

Catalog Number **D3813**

Synonyms: Anti-Death Receptor 4; Anti-TRAIL-R1

Product Description

Anti-DR4, N-terminal is produced in rabbit using as immunogen a peptide corresponding to amino acids 1-20 of mature human DR4.

Anti-DR4, N-terminal specifically recognizes human DR4 by immunoblotting.

Apoptosis, or programmed cell death, is induced in cells by a group of death domain-containing receptors including TNFR1, Fas, DR3, DR4, and DR5. Binding of ligands to these receptors sends signals that activate members of the caspase family of proteases. The signals ultimately cause the degradation of chromosomal DNA by activating DNase.

DR4 is a novel death domain containing receptor whose ligand has been identified as TRAIL or apoptosis-inducing ligand 2 (Apo2L). DR4 is sometimes referred to as TRAIL Receptor-1.¹⁻⁴ It is a member of the TNF superfamily of receptors that induce apoptosis. These proteins share homologies in both their extracellular ligand binding domains and their intracellular effector domains (death domains). These death domains are approximately 80 amino acids long.⁵ DR4 induces apoptosis in a variety of human tumor cell lines, but not in normal cells and activates NF- κ B.^{2,3} DR4 is expressed in most human tissues including spleen, peripheral blood leukocytes, small intestine, and thymus.

Reagent

Supplied at 1 mg/ml in phosphate buffered saline containing 0.02% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Antibody can be stored at 2-8 °C for three months and at -20 °C for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Product Profile

Immunoblotting: the recommended working antibody dilution is 1:500-1:1,000 using total HeLa, K562, and Jurkat whole cell lysates. An ~57 kDa band is detected

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

1. Pan, G., et al., The receptor for the cytotoxic ligand TRAIL. *Science*, **276**, 111-113 (1997).
2. Wiley, S.R., et al., Identification and characterization of a new member of the TNF family that induces apoptosis. *Immunity*, **3**, 673-682 (1995).
3. Pitti, R.M., et al., Induction of apoptosis by Apo-2 ligand, a new member of the tumor necrosis factor cytokine family. *J. Biol. Chem.*, **271**, 12687-12690 (1996).
4. Schneider, P., et al., TRAIL receptors 1 (DR4) and 2 (DR5) signal FADD-dependent apoptosis and activate NF- κ B. *Immunity*, **7**, 831-836 (1997).
5. Singh, A., et al., Death domain receptors and their role in cell demise. *J. Interferon Cytokine Res.*, **18**, 439-450 (1998).

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