

#8074 Store at -20C

DR5 (D4E9) XP® Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H	Endogenous	40, 48	Rabbit IgG	#O14763	8795

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

DR5 (D4E9) XP® Rabbit mAb recognizes endogenous levels of total DR5 protein. This antibody detects both the short and long isoforms of DR5.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg260 within the cytoplasmic region of human DR5 protein.

Background

The tumor necrosis factor receptor family, which includes TNF-R1, Fas, DR3, DR4, DR5, and DR6, plays an important role in the regulation of apoptosis in various physiological systems (1,2). The receptors are activated by a family of cytokines that include TNF, FasL, and TNF-related apoptosis-inducing ligand (TRAIL). They are characterized by a highly conserved extracellular region containing cysteine-rich repeats and a conserved intracellular region of about 80 amino acids termed the death domain (DD). The DD is important for transducing the death signal by recruiting other DD containing adaptor proteins (FADD, TRADD, RIP) to the death-inducing signaling complex (DISC), resulting in activation of caspases. DR5 is a receptor for TNF-related apoptosis inducing ligand (TRAIL), which has been shown to induce apoptosis in a variety of cell types and has been targeted for cancer therapy (1-5). Structurally, DR5 contains an amino-terminal leader cleavage site, followed by an extracellular region containing two cysteine-rich repeats, a central transmembrane domain, and a carboxy-terminal DD. DR5 is expressed in a wide variety of tissues and is a transcriptional target of p53 (6-8). It induces apoptosis through a FADD-dependent pathway. Deletion of DR5 leads to resistance in TRAIL-mediated apoptosis as well as an abrogated response to DNA-damaging stimuli (9). At least two isoforms of DR5 are produced by alternative splicing (10).

Background References

1. Nagata, S. (1997) *Cell* 88, 355-65.
2. Thorburn, A. (2004) *Cell Signal* 16, 139-44.
3. Wiley, S.R. et al. (1995) *Immunity* 3, 673-82.
4. Walczak, H. et al. (1997) *EMBO J* 16, 5386-97.
5. Chaudhary, P.M. et al. (1997) *Immunity* 7, 821-30.
6. MacFarlane, M. et al. (1997) *J Biol Chem* 272, 25417-20.
7. Wu, G.S. et al. (2000) *Adv Exp Med Biol* 465, 143-51.
8. Wu, G.S. et al. (1997) *Nat Genet* 17, 141-3.
9. Finnberg, N. et al. (2005) *Mol Cell Biol* 25, 2000-13.
10. Screaton, G.R. et al. (1997) *Curr Biol* 7, 693-6.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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