Revision 1

Store at -20C

#42533

DR4 (D9S1R) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC, FC-FP	H	Endogenous	35-55	Rabbit IgG	#O00220	8797

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:800
Flow Cytometry (Fixed/Permeabilized)	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

DR4 (D9S1R) Rabbit mAb recognizes endogenous levels of total DR4 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminal, cytoplasmic domain of human DR4 protein.

Background

The tumor necrosis factor receptor family, which includes TNF-RI, 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.
DR4 (TRAIL-RI, TNFRSF10A) and DR5 (TRAIL-R2, TNFRSF10B) are receptors for the cytokine TRAIL. Both receptors contain death domains that recruit DISC complexes triggering caspase activation and apoptosis (3-6). The ability of TRAIL to selectively kill malignant cells has led to clinical studies involving TRAIL and receptor agonists (7).

Background References

1. Nagata, S. (1997) *Cell* 88, 355-65.
2. Thorburn, A. (2004) *Cell Signal* 16, 139-44.
3. Pan, G. et al. (1997) *Science* 276, 111-3.
4. Walczak, H. et al. (1997) *EMBO J* 16, 5386-97.
5. Chaudhary, P.M. et al. (1997) *Immunity* 7, 821-30.
6. Schneider, P. et al. (1997) *Immunity* 7, 831-6.
7. Yang, A. et al. (2010) *Curr Opin Cell Biol* 22, 837-44.

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

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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