Revision 1

#20772 Store at -20C

DR3 (D4O3X) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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	H	Endogenous	55-60	Rabbit IgG	#Q93038	8718

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

DR3 (D4O3X) Rabbit mAb recognizes endogenous levels of total DR3 protein. A band of unknown origin is detected at at 110 kDa in some cell lines.

Species predicted to react based on 100% sequence homology:

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu335 of human DR3 protein. The antigen resides within the cytoplasmic domain of DR3.

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. DR3/WSL-1/Apo-3/TRAMP/LARD is a TNFR family member containing the characteristic extracellular cysteine-repeats, transmembrane region, and an intracellular DD (3-7). DR3 is activated by its ligand Apo-3L/TWEAK to induce apoptosis and activation of NF-κB (8,9). Like TNF-R1, DR3 binds to the DD adaptor protein TRADD, which can then associate with other DD proteins like FADD and RIP as well as members of the TRAF family (3,4). Tissue expression of DR3 is very restricted, primarily seen on the surface of activated thymocytes and lymphocytes and plays an important role in thymocyte negative selection (3,4,10). Studies have also indicated an association with DR3 and rheumatoid arthritis (11,12).

Background References

1. Nagata, S. (1997) *Cell* 88, 355-65.
2. Thorburn, A. (2004) *Cell Signal* 16, 139-44.
3. Chinnaiyan, A.M. et al. (1996) *Science* 274, 990-2.
4. Kitson, J. et al. (1996) *Nature* 384, 372-5.
5. Marsters, S.A. et al. (1996) *Curr Biol* 6, 1669-76.
6. Bodmer, J.L. et al. (1997) *Immunity* 6, 79-88.
7. Screaton, G.R. et al. (1997) *Proc Natl Acad Sci U S A* 94, 4615-9.
8. Marsters, S.A. et al. (1998) *Curr Biol* 8, 525-8.
9. Kaptein, A. et al. (2000) *FEBS Lett* 485, 135-41.
10. Wang, E.C. et al. (2001) *Mol Cell Biol* 21, 3451-61.
11. Osawa, K. et al. (2004) *Genes Immun* 5, 439-43.
12. Borysenko, C.W. et al. (2005) *Biochem Biophys Res Commun* 328, 794-9.

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

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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Limited Uses