

DR3 (D3 2-1-1): sc-53974

BACKGROUND

Tumor necrosis factor (TNF)-related cytokines are pleiotropic factors that initiate various cellular processes including cell death, proliferation and differentiation. Their effects are mediated by a family of receptors which includes TNF-R1, TNF-R2, NGFR (nerve growth factor receptor) and FAS. The members of this family are type I membrane receptors and are characterized by the presence of cysteine-rich repeats in their extracellular domains. Several of these receptors, including TNF-R1 and FAS, contain a region of intracellular homology, designated the death domain, known to signal apoptosis. A new death domain member of this family, DR3 (also designated Wsl-1, APO-3, TRAMP and LARD) has been shown to induce apoptosis and activation of NF κ B. DR3 is most similar in sequence to TNF-R1, but is more restricted in tissue distribution. DR3 is highly expressed in thymocytes and lymphocytes.

REFERENCES

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2. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation, and death. *Cell* 76: 959-962.
3. Nagata, S., et al. 1995. The FAS death factor. *Science* 267: 1449-1456.
4. Ware, C.F., et al. 1996. Apoptosis mediated by the TNF-related cytokine and receptor families. *J. Cell. Biochem.* 60: 47-55.
5. Kitson, J., et al. 1996. A death-domain-containing receptor that mediates apoptosis. *Nature* 384: 372-375.
6. Chinnaiyan, A.M., et al. 1996. Signal transduction by DR3, a death domain containing receptor related to TNFR-1 and CD95. *Science* 274: 990-992.
7. Marsters, S.A., et al. 1996. APO-3, a new member of the tumor necrosis factor receptor family, contains a death domain and activates apoptosis and NF κ B. *Curr. Biol.* 6: 1669-1676.
8. Bodmer, J.L., et al. 1997. TRAMP, a novel apoptosis mediating receptor with sequence homology to tumor necrosis factor receptor 1 and FAS (APO-1/CD95). *Immunity* 6: 79-88.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF25 (human) mapping to 1p36.31.

SOURCE

DR3 (D3 2-1-1) is a mouse monoclonal antibody raised against recombinant full length DR3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DR3 (D3 2-1-1) is available conjugated to either phycoerythrin (sc-53974 PE) or fluorescein (sc-53974 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

DR3 (D3 2-1-1) is recommended for detection of DR3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DR3 siRNA (h): sc-35216, DR3 shRNA Plasmid (h): sc-35216-SH and DR3 shRNA (h) Lentiviral Particles: sc-35216-V.

Molecular Weight (predicted) of DR3: 45 kDa.

Molecular Weight (observed) of DR3: 56-70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or C32 whole cell lysate: sc-2205.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.