

DR3 (B-8): sc-374203

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

1. Tartaglia, L.A., et al. 1993. A novel domain within the 55 kDa TNF receptor signals cell death. *Cell* 74: 845-853.
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.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF25 (human) mapping to 1p36.31; Tnfrsf25 (mouse) mapping to 4 E2.

SOURCE

DR3 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 387-416 at the C-terminus of DR3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DR3 (B-8) is available conjugated to agarose (sc-374203 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374203 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374203 PE), fluorescein (sc-374203 FITC), Alexa Fluor[®] 488 (sc-374203 AF488), Alexa Fluor[®] 546 (sc-374203 AF546), Alexa Fluor[®] 594 (sc-374203 AF594) or Alexa Fluor[®] 647 (sc-374203 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374203 AF680) or Alexa Fluor[®] 790 (sc-374203 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374203 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

DR3 (B-8) is recommended for detection of DR3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

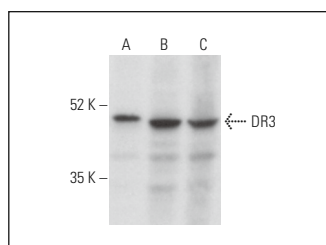
Suitable for use as control antibody for DR3 siRNA (h): sc-35216, DR3 siRNA (m): sc-35217, DR3 shRNA Plasmid (h): sc-35216-SH, DR3 shRNA Plasmid (m): sc-35217-SH, DR3 shRNA (h) Lentiviral Particles: sc-35216-V and DR3 shRNA (m) Lentiviral Particles: sc-35217-V.

Molecular Weight (predicted) of DR3: 45 kDa.

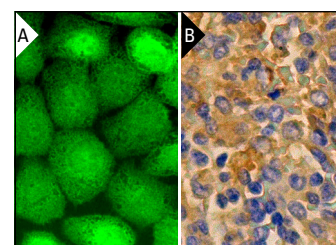
Molecular Weight (observed) of DR3: 56-70 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, BYDP whole cell lysate: sc-364368 or NIH/3T3 whole cell lysate: sc-2210.

DATA



DR3 (B-8): sc-374203. Western blot analysis of DR3 expression in SH-SY5Y (A), BYDP (B) and NIH/3T3 (C) whole cell lysates.



DR3 (B-8): sc-374203. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (B).

SELECT PRODUCT CITATIONS

1. Yang, G.L., et al. 2017. TNFSF15 inhibits VEGF-stimulated vascular hyperpermeability by inducing VEGFR2 dephosphorylation. *FASEB J.* 31: 2001-2012.
2. Kumanishi, S., et al. 2019. Epigenetic modulators hydralazine and sodium valproate act synergistically in VEG1-mediated anti-angiogenesis and VEGF interference in human osteosarcoma and vascular endothelial cells. *Int. J. Oncol.* 55: 167-178.
3. Li, J., et al. 2021. Tumor necrosis factor ligand-related molecule 1A maintains blood-retinal barrier via modulating SHP-1-Src-VE-cadherin signaling in diabetic retinopathy. *FASEB J.* 35: e22008.

STORAGE

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

RESEARCH USE

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