

# DR4 (B-N28): sc-65312

## BACKGROUND

Tumor necrosis factor (TNF) is a pleiotropic cytokine whose function is mediated by two distinct cell surface receptors, designated TNF-R1 and TNF-R2, which are expressed on most cell types. TNF function is primarily mediated through TNF-R1 signaling. Both receptors belong to the growing TNF receptor superfamily which includes FAS antigen and CD40. TNF-R1 contains a cytoplasmic motif, termed the "death domain", that has been found to be necessary for the transduction of the apoptotic signal. The death domain is also found in several other receptors, including FAS, DR2 (or TRUNDD), DR3 (Death Receptor 3), DR4 and DR5. TRUNDD, DR4 and DR5 are receptors for the apoptosis-inducing cytokine TRAIL. A non-death domain-containing receptor, designated decoy receptor (DcR1 or TRID), also specifically associates with TRAIL and may play a role in cellular resistance to apoptotic stimuli.

## REFERENCES

1. Tartaglia, L.A., Ayres, T.M., Wong, G.H. and Goeddel, D.V. 1993. A novel domain within the 55 kDa TNF receptor signals cell death. *Cell* 74: 845-853.
2. Smith, C.A., Farrah, T. and Goodwin, R.G. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation, and death. *Cell* 76: 959-962.
3. Nagata, S. and Golstein P. 1995. The FAS death factor. *Science* 267: 1449-1456.
4. Kitson, J., Raven, T., Jiang, Y.P., Goeddel, D.V., Giles, K.M., Pun, K.T., Grinham, C.J., Brown, R. and Farrow, S.N. 1996. A death-domain-containing receptor that mediates apoptosis. *Nature* 384: 372-375.
5. Pan, G., O'Rourke, K., Chinnaiyan, A., Gentz, R., Ebner, R., Ni, J. and Dixit, V. 1997. The receptor for the cytotoxic ligand TRAIL. *Science* 276: 111-113.
6. Pan, G., Ni, J., Wei, Y.F., Yu, G., Gentz, R. and Dixit, V.M. 1997. An antagonist decoy receptor and a death domain-containing receptor for TRAIL. *Science* 277: 815-818.
7. Sheridan, J.P., Marsters, S., Pitti, R., Gurney, A., Skubatch, M., Baldwin, D., Ramakrishnan, L., Gray, C., Baker, K., Wood, W., Goddard, A., Godowski, P. and Ashkenazi, A. 1997. Control of TRAIL-induced apoptosis by a family of signaling and decoy receptors. *Science* 277: 818-821.
8. Pan, G., Ni, J., Yu, G., Wei, Y.F. and Dixit, V.M. 1998. TRUNDD, a new member of the TRAIL receptor family that antagonizes TRAIL signalling. *FEBS Lett.* 424: 41-45.

## CHROMOSOMAL LOCATION

Genetic locus: TNFRSF10A (human) mapping to 8p21.3.

## SOURCE

DR4 (B-N28) is a mouse monoclonal antibody raised against recombinant TRAIL R1/Fc chimera of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

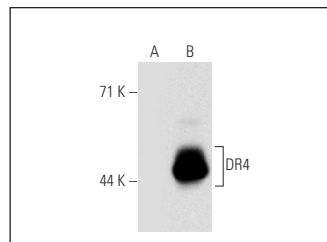
DR4 (B-N28) is recommended for detection of DR4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for DR4 siRNA (h): sc-35218, DR4 shRNA Plasmid (h): sc-35218-SH and DR4 shRNA (h) Lentiviral Particles: sc-35218-V

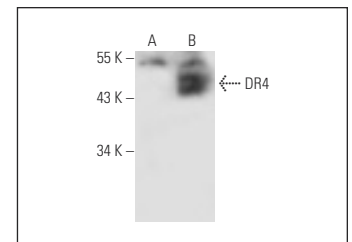
Molecular Weight of DR4: 56 kDa.

Positive Controls: DR4 (h2): 293T Lysate: sc-173513 or HeLa whole cell lysate: sc-2200.

## DATA



DR4 (B-N28): sc-65312. Western blot analysis of DR4 expression in non-transfected: sc-110760 (A) and human DR4 transfected: sc-112977 (B) 293T whole cell lysates.



DR4 (B-N28): sc-65312. Western blot analysis of DR4 expression in non-transfected: sc-117752 (A) and human DR4 transfected: sc-173513 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Wang, W.J., Li, Q.Q., Xu, J.D., Cao, X.X., Li, H.X., Tang, F., Chen, Q., Yang, J.M., Xu, Z.D. and Liu, X.P. 2008. Over-expression of ubiquitin carboxy terminal hydrolase-L1 induces apoptosis in breast cancer cells. *Int. J. Oncol.* 33: 1037-1045.
2. Fu, Y., Ye, X., Lee, M., Rankin, G. and Chen, Y.C. 2017. Prodelphinidins isolated from Chinese bayberry leaves induces apoptosis via the p53-dependent signaling pathways in OVCAR-3 human ovarian cancer cells. *Oncol. Lett.* 13: 3210-3218.

## 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.



See **DR4 (B-9): sc-8411** for DR4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.