

# DR5 (B-D37): sc-65314

## 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., et al. 1993. A novel domain within the 55 kd 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. and Golstein, P. 1995. The FAS death factor. *Science* 267: 1449-1456.
4. Kitson, J., et al. 1996. A death-domain-containing receptor that mediates apoptosis. *Nature* 384: 372-375.

## CHROMOSOMAL LOCATION

Genetic locus: TNFRSF10B (human) mapping to 8p21.3.

## SOURCE

DR5 (B-D37) is a mouse monoclonal antibody raised against recombinant TRAIL R2/ Fc chimera of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

DR5 (B-D37) is recommended for detection of DR5 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 DR5 siRNA (h): sc-40237, DR5 shRNA Plasmid (h): sc-40237-SH and DR5 shRNA (h) Lentiviral Particles: sc-40237-V.

Molecular Weight of DR5: 48 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207 or DR5 (h): 293 Lysate: sc-110563.

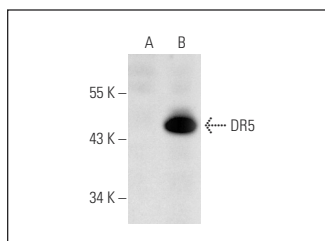
## STORAGE

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.

## DATA



DR5 (B-D37): sc-65314. Western blot analysis of DR5 expression in non-transfected: sc-110760 (A) and human DR5 transfected: sc-110563 (B) 293 whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Jin, X., et al. 2008. Chemosensitization in non-small cell lung cancer cells by IKK inhibitor occurs via NFκB and mitochondrial cytochrome c cascade. *J. Cell. Mol. Med.* 13: 4596-4607.
2. Day, T.W., et al. 2008. C-FLIP knockdown induces ligand-independent DR5-, FADD-, caspase-8-, and caspase-9-dependent apoptosis in breast cancer cells. *Biochem. Pharmacol.* 76: 1694-1704.
3. Zhang, S., et al. 2017. A novel chalcone derivative S17 induces apoptosis through ROS dependent DR5 up-regulation in gastric cancer cells. *Sci. Rep.* 7: 9873.
4. Park, C., et al. 2017. Induction of apoptosis by Dae-Hwang-Mok-Dan-Tang in HCT-116 colon cancer cells through activation of caspases and inactivation of the phosphatidylinositol 3-kinase/Akt signaling. *Integr. Med. Res.* 6: 179-189.
5. Kang, K.H., et al. 2017. Bufalin sensitizes human bladder carcinoma cells to TRAIL-mediated apoptosis. *Oncol. Lett.* 14: 853-859.
6. Xu, L., et al. 2017. DR5-Cbl-b/c-Cbl-TRAF2 complex inhibits TRAIL-induced apoptosis by promoting TRAF2-mediated polyubiquitination of caspase-8 in gastric cancer cells. *Mol. Oncol.* 11: 1733-1751.
7. Okubo, K., et al. 2018. Nelfinavir induces endoplasmic reticulum stress and sensitizes renal cancer cells to TRAIL. *Anticancer Res.* 38: 4505-4514.
8. Greer, Y.E., et al. 2019. MEDI3039, a novel highly potent tumor necrosis factor (TNF)-related apoptosis-inducing ligand (TRAIL) receptor 2 agonist, causes regression of orthotopic tumors and inhibits outgrowth of metastatic triple-negative breast cancer. *Breast Cancer Res.* 21: 27.

## CONJUGATES

See **DR5 (D-6): sc-166624** for DR5 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.