

DR5 (MD5-1): sc-57086

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

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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.
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7. Sheridan, J., 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.
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CHROMOSOMAL LOCATION

Genetic locus: *Tnfrsf10b* (mouse) mapping to 14 D2.

SOURCE

DR5 (MD5-1) is a Armenian hamster monoclonal antibody raised against DR5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DR5 (MD5-1) is recommended for detection of DR5 of mouse origin by flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for DR5 siRNA (m): sc-40238, DR5 shRNA Plasmid (m): sc-40238-SH and DR5 shRNA (m) Lentiviral Particles: sc-40238-V.

Molecular Weight of DR5: 48 kDa.

SELECT PRODUCT CITATIONS

1. Estornes, Y., Dondelinger, Y., Weber, K., Bruggeman, I., Peall, A., MacFarlane, M., Lebecque, S., Vandenameele, P. and Bertrand, M.J.M. 2018. N-glycosylation of mouse TRAIL-R restrains TRAIL-induced apoptosis. *Cell Death Dis.* 9: 494.
2. Park, C., Choi, E.O., Hwangbo, H., Lee, H., Jeong, J.W., Han, M.H., Moon, S.K., Yun, S.J., Kim, W.J., Kim, G.Y., Hwang, H.J. and Choi, Y.H. 2022. Induction of apoptotic cell death in human bladder cancer cells by ethanol extract of *Zanthoxylum schinifolium* leaf, through ROS-dependent inactivation of the PI3K/Akt signaling pathway. *Nutr. Res. Pract.* 16: 330-343.

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.

PROTOCOLS

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