SANTA CRUZ BIOTECHNOLOGY, INC.

DR4 (N-19): sc-6824

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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. and Golstein, P. 1995. The FAS death factor. Science 267: 1449-1456.

CHROMOSOMAL LOCATION

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

SOURCE

DR4 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of DR4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6824 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DR4 (N-19) is recommended for detection of DR4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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 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: HeLa whole cell lysate: sc-2200.

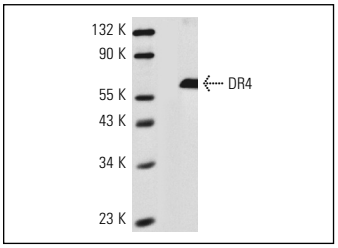
RESEARCH USE

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

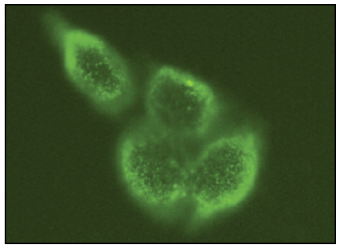
STORAGE

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

DATA



DR4 (N-19): sc-6824. Western blot analysis of DR4 expression in HeLa whole cell lysate.



DR4 (N-19): sc-6824. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Mitsiades, C., et al. 2001. TRAIL/Apo2L ligand selectively induces apoptosis and overcomes drug resistance in multiple myeloma: therapeutic applications. Blood 98: 795-804.
2. Gajate, C. and Mollinedo, F. 2007. Edelfosine and perifosine induce selective apoptosis in multiple myeloma by recruitment of death receptors and downstream signaling molecules into lipid rafts. Blood 109: 711-719.
3. Bhushan, S., et al. 2007. A triterpenediol from *Boswellia serrata* induces apoptosis through both the intrinsic and extrinsic apoptotic pathways in human leukemia HL-60 cells. Apoptosis 12: 1911-1926.
4. Kumar, A., et al. 2008. An essential oil and its major constituent isointermedeol induce apoptosis by increased expression of mitochondrial cytochrome c and apical death receptors in human leukaemia HL-60 cells. Chem. Biol. Interact. 171: 332-347.
5. Lunghi, P., et al. 2008. Targeting MEK/MAPK signal transduction module potentiates ATO-induced apoptosis in multiple myeloma cells through multiple signaling pathways. Blood 112: 2450-2462.
6. Gajate, C., et al. 2009. Lipid raft connection between extrinsic and intrinsic apoptotic pathways. Biochem. Biophys. Res. Commun. 380: 780-784.
7. Kumar, A., et al. 2011. A novel parthenin analog exhibits anti-cancer activity: activation of apoptotic signaling events through robust NO formation in human leukemia HL-60 cells. Chem. Biol. Interact. 193: 204-215.
8. Khan, S., et al. 2012. A novel cyano derivative of 11-keto-β-boswellic acid causes apoptotic death by disrupting PI3K/AKT/Hsp-90 cascade, mitochondrial integrity, and other cell survival signaling events in HL-60 cells. Mol. Carcinog. 51: 679-695.

MONOS Satisfaction Guaranteed

Try **DR4 (B-9): sc-8411** or **DR4 (B-N28): sc-65312**, our highly recommended monoclonal aternatives to DR4 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **DR4 (B-9): sc-8411**.