

# TRAIL (N2B2): sc-56245

## BACKGROUND

Proteins belonging to the tumor necrosis factor (TNF) superfamily are potent mediators of inflammation and of the immune system. Members of the TNF superfamily include TNF $\beta$ , lymphotoxin  $\beta$  (LT $\beta$ ), CD40L, CD30L, CD27L, O $\alpha$ 40L, 4-1BBL and FAS-L (APO-1). Most TNF family members are type II transmembrane proteins that are proteolytically processed at their carboxy-terminal extracellular domain to form a soluble homotrimeric molecule. The extracellular domain of an additional TNF family member, designated TNF-related apoptosis-inducing ligand (TRAIL) or APO-2L, exhibits 14-28% homology with other members of the TNF family. Like soluble FAS-L, soluble TRAIL will induce apoptosis. The morphological and cellular changes caused by the introduction of soluble TRAIL to Jurkat cells are indistinguishable from those caused by the introduction of soluble FAS-L. Unlike FAS-L, whose expression is more or less restricted to activated T cells, significant levels of TRAIL are observed in many tissues and it is constitutively expressed by some cell lines.

## REFERENCES

1. 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.
2. Cosman, D. 1994. A family of ligands for the TNF receptor superfamily. *Stem Cells* 12: 440-455.
3. Cleveland, J.L. and Ihle, J.N. 1995. Contenders in FAS-L/TNF death signaling. *Cell* 81: 479-482.
4. Nagata, S. and Golstein, P. 1995. The FAS death factor. *Science* 267: 1449-1456.
5. Wiley, S.R., Schooley, K., Smolak, P.J., Din, W.S., Huang, C.P., Nicholl, J.K., Sutherland, G.R., Smith, T.D., Rauch, C. and Smith, C.A. 1995. Identification and characterization of a new member of the TNF family that induces apoptosis. *Immunity* 3: 673-682.
6. Baker, S.J. and Reddy, E.P. 1996. Transducers of life and death: TNF receptors superfamily and associated proteins. *Oncogene* 12: 1-9.
7. Pitti, R.M., Marsters, S.A., Ruppert, S., Donahue, C.J., Moore, A. and Ashkenazi, A. 1996. Induction of apoptosis by APO-2 ligand, a new member of the tumor necrosis factor cytokine family. *J. Biol. Chem.* 271: 12687-12690.
8. Plasilova, M., Zivny, J., Jelinek, J., Neuwirtova, R., Cermak, J., Necas, E., Andera, L. and Stopka, T. 2002. TRAIL (APO-2L) suppresses growth of primary human leukemia and myelodysplasia progenitors. *Leukemia* 16: 67-73.
9. Hyer, M.L., Croxton, R., Krajewska, M., Krajewski, S., Kress, C.L., Lu, M., Suh, N., Sporn, M.B., Cryns, V.L., Zapata, J.M. and Reed, J.C. 2005. Synthetic triterpenoids cooperate with tumor necrosis factor-related apoptosis-inducing ligand to induce apoptosis of breast cancer cells. *Cancer Res.* 65: 4799-4808.

## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: Tnfsf10 (mouse) mapping to 3 A3.

## SOURCE

TRAIL (N2B2) is a rat monoclonal antibody raised against TRAIL of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRAIL (N2B2) is available conjugated to either phycoerythrin (sc-56245 PE) or fluorescein (sc-56245 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

TRAIL (N2B2) is recommended for detection of TRAIL of mouse origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for TRAIL siRNA (m): sc-37271, TRAIL shRNA Plasmid (m): sc-37271-SH and TRAIL shRNA (m) Lentiviral Particles: sc-37271-V.

Molecular Weight of TRAIL: 34 kDa.

Molecular Weight of soluble TRAIL: 20 kDa.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.