

LT β R (6D66): sc-71518

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, CD40 and lymphotoxin β receptor (LT β R). LT β R is activated upon association with the heterotrimeric lymphotoxin LT- α_1/β_2 , resulting in NF κ B activation and the initiation of apoptosis. LT β R is expressed on the surface of most cell types, excluding T and B lymphocytes, and is involved in lymphoid organ development.

REFERENCES

- 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.
- Crowe, P.D., VanArsdale, T.L., Walter, B.N., Ware, C.F., Hession, C., Ehrenfels, B., Browning, J.L., Din, W.S., Goodwin, R.G. and Smith, C.A. 1994. A lymphotoxin β -specific receptor. *Science* 264: 707-710.
- Nagata, S. and Golstein, P. 1995. The FAS death factor. *Science* 267: 1449-1456.
- Ware, C.F., VanArsdale, T.L., Crowe, P.D. and Browning, J.L. 1995. The ligands and receptor of the lymphotoxin system. *Curr. Top. Microbiol. Immunol.* 198: 175-218.
- VanArsdale, T.L., VanArsdale, S.L., Force, W.R., Walter, B.N., Mosialos, G., Kieff, E., Reed, J.C. and Ware, C.F. 1997. Lymphotoxin β receptor signaling complex: role of tumor necrosis factor receptor-associated factor 3 recruitment in cell death and activation of nuclear factor κ B. *Proc. Natl. Acad. Sci. USA* 94: 2460-2465.
- Futterer, A., Mink, K., Luz, A., Kosco-Vilbois, M.H. and Pfeffer, K. 1998. The lymphotoxin β receptor controls organogenesis and affinity maturation in peripheral lymphoid tissues. *Immunity* 9: 59-70.
- Lee, Y., Chin, R.K., Christiansen, P., Sun, Y., Tumanov, A.V., Wang, J., Chervonsky, A.V. and Fu, Y.X. 2006. Recruitment and activation of naive T cells in the islets by lymphotoxin β receptor-dependent tertiary lymphoid structure. *Immunity* 25: 499-509.
- Columba-Cabezas, S., Griguoli, M., Rosicarelli, B., Magliozzi, R., Ria, F., Serafini, B. and Aloisi, F. 2006. Suppression of established experimental autoimmune encephalomyelitis and formation of meningeal lymphoid follicles by lymphotoxin β receptor-Ig fusion protein. *J. Neuroimmunol.* 179: 76-86.
- Lukashev, M., Lepage, D., Wilson, C., Bailly, V., Garber, E., Lukashin, A., Ngam-Ek, A., Zeng, W., Allaire, N., Perrin, S., Xu, X., Szeliga, K., Wortham, K., Kelly, R., Bottiglio, C., Ding, J., Griffith, L., Heaney, G., Silverio, E., et al. 2006. Targeting the lymphotoxin β receptor with agonist antibodies as a potential cancer therapy. *Cancer Res.* 66: 9617-9624.

CHROMOSOMAL LOCATION

Genetic locus: LTBR (human) mapping to 12p13.31.

SOURCE

LT β R (6D66) is a rat monoclonal antibody raised against amino acids 28-220 of LT β R of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

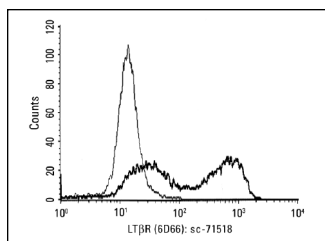
APPLICATIONS

LT β R (6D66) is recommended for detection of LT β R of human origin by immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for LT β R siRNA (h): sc-40241, LT β R shRNA Plasmid (h): sc-40241-SH and LT β R shRNA (h) Lentiviral Particles: sc-40241-V.

Molecular Weight of LT β R: 55-60 kDa.

DATA



LT β R (6D66): sc-71518. Intracellular FCM analysis of fixed and permeabilized non-transfected (thin line) and LT β R transfected (thick line) 293T cells.

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.