SANTA CRUZ BIOTECHNOLOGY, INC.

LT-β (FL-244): sc-20655

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tumor necrosis factor (TNF) and lymphotoxin-α (LT-α, also known as TNFα) are members of a family of secreted and cell surface cytokines that participate in the regulation of immune and inflammatory responses. LT-β (lymphotaxin-β or TNFC) is a type II membrane protein with significant homology to TNF, LT-α and the ligand for the CD40 receptor. LT-α is present on the surface of activated T, B and LAK cells as a complex with LT-β. LT-β, also expressed by active lymphocytes, forms a heterotrimer with LT-α on the cell surface and anchors LT-α to the cell surface. A TNF receptor-related protein, the LT-β receptor (also known as TNFC receptor), is the human receptor for the LT-α/LT-β heterotrimer. There are two LT-β isoforms expressed in human lymphoid cell lines and non-Hodgkin's lymphomas. The gene which encodes LT-β maps to the major histocompatibility complex region on human chromosome 6p21.33.

REFERENCES

1. Browning, J.L., et al. 1993. Lym-photoxin β, a novel member of the TNF family that forms a heteromeric complex with lymphotoxin on the cell surface. Cell 72: 847-856.
2. Crowe, P.D., et al. 1994. A lymphotoxin-β-specific receptor. Science 264: 707-710.
3. Nakamura, T., et al. 1995. The murine lymphotoxin-β receptor cDNA: isolation by the signal sequence trap and chromosomal mapping. Genomics 30: 312-319.
4. Nalabolu, S.R., et al. 1996. Genes in a 220-kb region spanning the TNF cluster in human MHC. Genomics 31: 215-222.
5. Warzocha, K., et al. 1997. Identification of two lymphotoxin β isoforms expressed in human lymphoid cell lines and non-Hodgkin's lymphomas. Biochem. Biophys. Res. Commun. 238: 273-276.
6. Junt, T., et al. 2006. Expression of lymphotoxin β governs immunity at two distinct levels. Eur. J. Immunol. 36: 2061-2075.
7. Cui, C.Y., et al. 2006 Ectodysplasin regulates the lymphotoxin-β pathway for hair differentiation. Proc. Natl. Acad. Sci. USA 103: 9142-9147.
8. O'Rourke, K.P., et al. 2008. High levels of lymphotoxin-β (LT-β) gene expression in rheumatoid arthritis synovium: clinical and cyto-kine correlations. Rheumatol. Int. 28: 979-986.

CHROMOSOMAL LOCATION

Genetic locus: LTB (human) mapping to 6p21.33; Ltb (mouse) mapping to 17 B1.

SOURCE

LT-β (FL-244) is a rabbit polyclonal antibody raised against amino acids 1-244 representing full length LT-β of human origin.

STORAGE

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

PRODUCT

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

APPLICATIONS

LT-β (FL-244) is recommended for detection of LT-β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 LT-β siRNA (h): sc-39828, LT-β siRNA (m): sc-39829, LT-β shRNA Plasmid (h): sc-39828-SH, LT-β shRNA Plasmid (m): sc-39829-SH, LT-β shRNA (h) Lentiviral Particles: sc-39828-V and LT-β shRNA (m) Lentiviral Particles: sc-39829-V.

Molecular Weight of LT-β: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Cerutti, J.M., et al. 2007. Molecular profiling of matched samples identifies biomarkers of papillary thyroid carcinoma lymph node metastasis. Cancer Res. 67: 7885-7892.

RESEARCH USE

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

PROTOCOLS

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