SANTA CRUZ BIOTECHNOLOGY, INC.

TNFβ (E-6): sc-28345

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tumor necrosis factor β (TNFβ), also known as lymphotoxin, is a pleiotropic cytokine. TNFα, also known as cachectin, is a smaller cytokine that binds to the same receptors producing a vast array of effects similar to those of TNFβ. TNFβ and TNFα share 30% amino acid homology and have similar biological activities. TNFβ is produced by activated lymphocytes, including $CD4^+$ T helper cell type 1 lymphocytes, $CD8^+$ lymphocytes and certain B lymphoblastoid cell lines. TNFα is produced by several different cell types, which include lymphocytes, neutrophils and macrophages. TNFα and TNFβ can modulate many immune and inflammatory functions, while having the ability to inhibit tumor growth. Target tumor cells must express TNF receptors 1 and 2 to be killed, with the p55 receptor mediating the cytotoxic response.

CHROMOSOMAL LOCATION

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

SOURCE

TNFβ (E-6) is a mouse monoclonal antibody raised against amino acids 35-205 of TNFβ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TNFβ (E-6) is available conjugated to agarose (sc-28345 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28345 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28345 PE), fluorescein (sc-28345 FITC), Alexa Fluor® 488 (sc-28345 AF488), Alexa Fluor® 546 (sc-28345 AF546), Alexa Fluor® 594 (sc-28345 AF594) or Alexa Fluor® 647 (sc-28345 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28345 AF680) or Alexa Fluor® 790 (sc-28345 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TNFβ (E-6) is recommended for detection of TNFβ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:5000), 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 TNFβ siRNA (h): sc-37218, TNFβ siRNA (m): sc-37219, TNFβ shRNA Plasmid (h): sc-37218-SH, TNFβ shRNA Plasmid (m): sc-37219-SH, TNFβ shRNA (h) Lentiviral Particles: sc-37218-V and TNFβ shRNA (m) Lentiviral Particles: sc-37219-V.

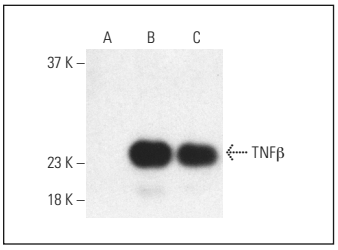
Molecular Weight of TNFβ: 19-25 kDa.

Positive Control: TNFβ (h): 293T Lysate: sc-113691.

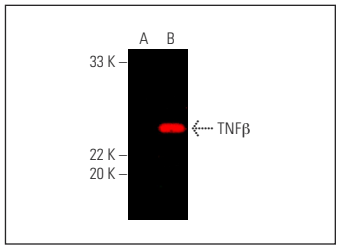
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TNFβ (E-6): sc-28345. Western blot analysis of TNFβ expression in non-transfected: sc-117752 (**A**), human TNFβ transfected: sc-113691 (**B**) and human TNFβ transfected: sc-159758 (**C**) 293T whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



TNFβ (E-6): sc-28345. Near-infrared western blot analysis of TNFβ expression in non-transfected: sc-117752 (**A**) and human TNFβ transfected: sc-113691 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Yang, L., et al. 2019. Comparison of Th1 and Th2 cytokines production in ovine lymph nodes during early pregnancy. Theriogenology 123: 177-184.
2. Zhang, L., et al. 2019. Modulation of helper T cytokines in thymus during early pregnancy in ewes. Animals 9: 245.
3. Yang, L., et al. 2019. Differential expression of T helper cytokines in the liver during early pregnancy in sheep. Anim. Reprod. 16: 332-339.
4. Kucka, K., et al. 2021. Membrane lymphotoxin-α2β is a novel tumor necrosis factor (TNF) receptor 2 (TNFR2) agonist. Cell Death Dis. 12: 360.

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.