SANTA CRUZ BIOTECHNOLOGY, INC.

TNFβ (E-6): sc-28345



BACKGROUND

Tumor necrosis factor β (TNF β), also known as lymphotoxin, is a pleiotropic cytokine. TNF α , also known as cachectin, is a smaller cytokine that binds to the same receptors producing a vast array of effects similar to those of TNF β . TNF β and TNF α share 30% amino acid homology and have similar biological activities. TNF β is produced by activated lymphocytes, including CD4+ T helper cell type 1 lymphocytes, CD8+ lymphocytes and certain B lymphoblastoid cell lines. TNF α is produced by several different cell types, which include lymphocytes, neutrophils and macrophages. TNF α and TNF β 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

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

PRODUCT

Each vial contains 200 μg IgG1 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

TNF β (E-6) is recommended for detection of TNF β 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 TNF β siRNA (h): sc-37218, TNF β siRNA (m): sc-37219, TNF β shRNA Plasmid (h): sc-37218-SH, TNF β shRNA Plasmid (m): sc-37219-SH, TNF β shRNA (h) Lentiviral Particles: sc-37218-V and TNF β shRNA (m) Lentiviral Particles: sc-37219-V.

Molecular Weight of TNF_B: 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





TNF β (E-6): sc-28345. Western blot analysis of TNF β expression in non-transfected: sc-11752 (A), human TNF β transfected: sc-113691 (B) and human TNF β transfected: sc-159758 (C) 293T whole cell lysates. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.

TNF β (E-6): sc-28345. Near-infrared western blot analysis of TNF β expression in non-transfected: sc-11752 (A) and human TNF β transfected: sc-113691 (**B**) 293T whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-lGos **B**-PC-CE 190: sc-516181.

SELECT PRODUCT CITATIONS

- Yang, L., et al. 2019. Comparison of Th1 and Th2 cytokines production in ovine lymph nodes during early pregnancy. Theriogenology 123: 177-184.
- Zhang, L., et al. 2019. Modulation of helper T cytokines in thymus during early pregnancy in ewes. Animals 9: 245.
- Yang, L., et al. 2019. Differential expression of T helper cytokines in the liver during early pregnancy in sheep. Anim. Reprod. 16: 332-339.
- Mohamed, M.E., et al. 2020. Yarrow oil ameliorates ulcerative colitis in mice model via regulating the NF-κB and PPAR-γ pathways. Intest. Res. 19: 194-205.
- 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.

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