

TNF α (4E1): sc-130349

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: TNF (human) mapping to 6p21.33.

SOURCE

TNF α (4E1) is a mouse monoclonal antibody raised against recombinant TNF α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TNF α (4E1) is available conjugated to agarose (sc-130349 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-130349 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130349 PE), fluorescein (sc-130349 FITC), Alexa Fluor[®] 488 (sc-130349 AF488), Alexa Fluor[®] 546 (sc-130349 AF546), Alexa Fluor[®] 594 (sc-130349 AF594) or Alexa Fluor[®] 647 (sc-130349 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-130349 AF680) or Alexa Fluor[®] 790 (sc-130349 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TNF α (4E1) is recommended for detection of TNF α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TNF α siRNA (h): sc-37216, TNF α shRNA Plasmid (h): sc-37216-SH and TNF α shRNA (h) Lentiviral Particles: sc-37216-V.

Molecular Weight of transmembrane TNF α : 26 kDa.

Molecular Weight of soluble TNF α : 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

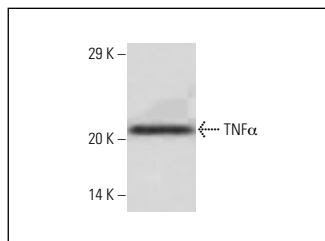
RESEARCH USE

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

STORAGE

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

DATA



TNF α (4E1): sc-130349. Western blot analysis of human recombinant TNF α .

SELECT PRODUCT CITATIONS

- He, S., et al. 2011. CD14⁺ cell-derived IL-29 modulates proinflammatory cytokine production in patients with allergic airway inflammation. *Allergy* 66: 238-246.
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- Yang, H., et al. 2015. Low back pain associated with lumbar disc herniation: role of moderately degenerative disc and annulus fibrous tears. *Int. J. Clin. Exp. Med.* 8: 1634-1644.
- Wang, T., et al. 2017. Regulation of autophagy inhibition and inflammatory response in glioma by Wnt signaling pathway. *Oncol. Lett.* 14: 7197-7200.
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- Amini, M., et al. 2020. Involvement of endocannabinoid system, inflammation and apoptosis in diabetes induced liver injury: role of 5-HT3 receptor antagonist. *Int. Immunopharmacol.* 79: 106158.
- Karslioglu, T., et al. 2021. The effects of micronized progesterone and cabergoline on a rat autotransplantation endometriosis model: a placebo controlled randomized trial. *J. Invest. Surg.* 34: 897-901.
- Dehqanizadeh, B., et al. 2022. Effect of early exercise on inflammatory parameters and apoptosis in CA1 area of the hippocampus following cerebral ischemia-reperfusion in rats. *Brain Res. Bull.* 182: 102-110.
- Borgo Sarmiento, E., et al. 2023. Proinflammatory cytokine expression in apical periodontitis from diabetic patients. *Int. J. Dent.* 2023: 4961827.

PROTOCOLS

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