

TNF α (52B83): sc-52746

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; Tnf (mouse) mapping to 17 B1.

SOURCE

TNF α (52B83) is a mouse monoclonal antibody raised against purified full length native TNF α of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TNF α (52B83) is recommended for detection of natural and recombinant TNF α of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TNF β or lymphotoxin.

TNF α (52B83) is also recommended for detection of natural and recombinant TNF α in additional species, including Guinea porcine, Chimpanzee, Cynomolgus and Rhesus monkey.

Suitable for use as control antibody for TNF α siRNA (h): sc-37216, TNF α siRNA (m): sc-37217, TNF α shRNA Plasmid (h): sc-37216-SH, TNF α shRNA Plasmid (m): sc-37217-SH, TNF α shRNA (h) Lentiviral Particles: sc-37216-V and TNF α shRNA (m) Lentiviral Particles: sc-37217-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.

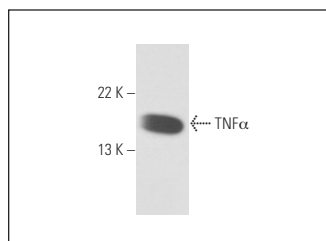
STORAGE

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

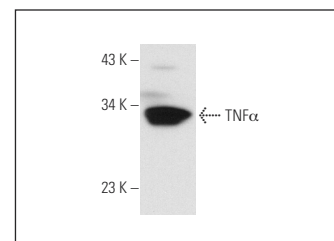
RESEARCH USE

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

DATA



TNF α (52B83): sc-52746. Western blot analysis of human recombinant TNF α .



TNF α (52B83): sc-52746. Western blot analysis of TNF α expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lee, E., et al. 2009. Clinical and immunohistochemical characteristics of mucocles. *Ann. Dermatol.* 21: 345-351.
2. Kim, J., et al. 2010. Wnt5a induces endothelial inflammation via β -catenin-independent signaling. *J. Immunol.* 185: 1274-1282.
3. Park, C.H., et al. 2011. Matrix metalloproteinase inhibitors attenuate neuroinflammation following focal cerebral ischemia in mice. *Korean J. Physiol. Pharmacol.* 15: 115-122.
4. Woo, C.W., et al. 2012. Toll-like receptor activation suppresses ER stress factor CHOP and translation inhibition through activation of eIF2B. *Nat. Cell Biol.* 14: 192-200.
5. Chen, Y.J. and Chang, L.S. 2013. Hydroquinone-induced miR-122 down-regulation elicits ADAM17 up-regulation, leading to increased soluble TNF- α production in human leukemia cells with expressed Bcr/Abl. *Biochem. Pharmacol.* 86: 620-631.
6. Takayanagi, T., et al. 2014. Caveolin 1 is critical for abdominal aortic aneurysm formation induced by angiotensin II and inhibition of lysyl oxidase. *Clin. Sci.* 126: 785-794.
7. Garcia, J.A., et al. 2015. Disruption of the NF κ B/NLRP3 connection by melatonin requires retinoid-related orphan receptor- α and blocks the septic response in mice. *FASEB J.* 29: 3863-3875.
8. Badshah, H., et al. 2016. Protective effect of lupeol against lipopolysaccharide-induced neuroinflammation via the p38/c-Jun N-terminal kinase pathway in the adult mouse brain. *J. Neuroimmune Pharmacol.* 11: 48-60.
9. Huang, C.H., et al. 2016. The association between p38 MAPK-mediated TNF α /TNFR2 up-regulation and 2-(4-aminophenyl)-7-methoxybenzothiazole-induced apoptosis in human leukemia U937 cells. *J. Cell. Physiol.* 231: 130-141.

CONJUGATES

See **TNF α (C-4): sc-133192** for TNF α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.