

# TNF $\alpha$ (N-19): sc-1350

## BACKGROUND

Tumor necrosis factor  $\beta$  (TNF $\beta$ ), also known as lymphotoxin, is a pleiotropic cytokine. TNF $\alpha$ , 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 $\beta$ . TNF $\beta$  and TNF $\alpha$  share 30% amino acid homology and have similar biological activities. TNF $\beta$  is produced by activated lymphocytes, including CD4<sup>+</sup> T helper cell type 1 lymphocytes, CD8<sup>+</sup> lymphocytes and certain B lymphoblastoid cell lines. TNF $\alpha$  is produced by several different cell types, which include lymphocytes, neutrophils and macrophages. TNF $\alpha$  and TNF $\beta$  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 $\alpha$  (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TNF $\alpha$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1350 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TNF $\alpha$  (N-19) is recommended for detection of TNF $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

TNF $\alpha$  (N-19) is also recommended for detection of TNF $\alpha$  in additional species, including equine, canine and feline.

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

Molecular Weight of transmembrane TNF $\alpha$ : 26 kDa.

Molecular Weight of soluble TNF $\alpha$ : 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 whole cell lysate: sc-2239 or K-562 whole cell lysate: sc-2203.

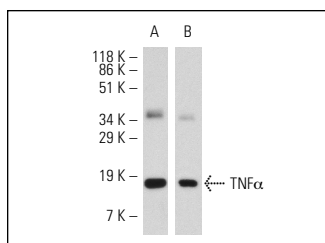
## STORAGE

Store at 4 $^{\circ}$  C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

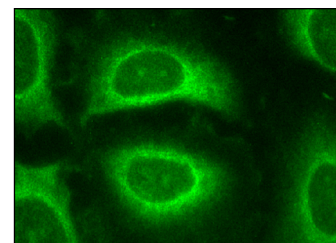
## RESEARCH USE

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

## DATA



TNF $\alpha$  (N-19): sc-1350. Western blot analysis of human recombinant TNF $\alpha$  (A) and mouse recombinant TNF $\alpha$  (B).



TNF $\alpha$  (N-19): sc-1350. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- de Miguel, M.P., et al. 2000. Immunoexpression of tumour necrosis factor  $\alpha$  and its receptors 1 and 2 correlates with proliferation/apoptosis equilibrium in normal, hyperplastic and carcinomatous human prostate. *Cytokine* 12: 535-538.
- Gao, J., et al. 2012. Ontogeny of angiotensin type 2 and type 1 receptor expression in mice. *J. Renin Angiotensin Aldosterone Syst.* 13: 341-352.
- Lam, S.Y., et al. 2012. Chronic intermittent hypoxia induces local inflammation of the rat carotid body via functional upregulation of proinflammatory cytokine pathways. *Histochem. Cell Biol.* 137: 303-317.
- Ahmad, A., et al. 2012. Protective effect of apocynin, a NADPH-oxidase inhibitor, against contrast-induced nephropathy in the diabetic rats: a comparison with n-acetylcysteine. *Eur. J. Pharmacol.* 674: 397-406.
- Cintra, D.E., et al. 2012. Unsaturated fatty acids revert diet-induced hypothalamic inflammation in obesity. *PLoS ONE* 7: e30571.
- Pal, D., et al. 2012. Fetuin-A acts as an endogenous ligand of TLR4 to promote lipid-induced Insulin resistance. *Nat. Med.* 18: 1279-1285.
- Collaco Rde, C., et al. 2012. Protection by *Mikania laevigata* (guaco) extract against the toxicity of *Philodryas olfersii* snake venom. *Toxicol* 60: 614-622.
- Kaur, J. and Tikoo, K. 2013. Evaluating cell specific cytotoxicity of differentially charged silver nanoparticles. *Food Chem. Toxicol.* 51: 1-14.
- Poggi, M., et al. 2013. Palmitoylation of TNF  $\alpha$  is involved in the regulation of TNF receptor 1 signalling. *Biochim. Biophys. Acta* 1833: 602-612.



Try **TNF $\alpha$  (C-4): sc-133192** or **TNF $\alpha$  (TN3-19.12): sc-12744**, our highly recommended monoclonal alternatives to TNF $\alpha$  (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **TNF $\alpha$  (C-4): sc-133192**.