BACKGROUND

Tumor necrosis factor β (TNFβ), also known as lymphotixin, 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: TNF (human) mapping to 6p21.33; Tnf (mouse) mapping to 17 B1.

SOURCE

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

PRODUCT

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

APPLICATIONS

TNFα (52B83) is recommended for detection of natural and recombinant TNFα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100–1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50–1:500), flow cytometry (1 μg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30–1:3000); non cross-reactive with TNFβ or lymphotixin.

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

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

Molecular Weight of transmembrane TNFα: 26 kDa.

Molecular Weight of soluble TNFα: 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

SELECT PRODUCT CITATIONS


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