**Background**

Tumor necrosis factor β (TNFβ), also known as lymphotoxin, 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.

**Source**

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

**Product**

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

TNFα (4E1) is available conjugated to agarose (sc-130349 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-130349 HRP), 200 µg/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 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**Applications**

TNFα (4E1) is recommended for detection of TNFα of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 TNFα siRNA (h): sc-37216, TNFα shRNA Plasmid (h): sc-37216-SH and TNFα shRNA (h) Lentiviral Particles: sc-37216-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.

**Select Produt Citations**


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