

TNF β (hBA-171): sc-4565

BACKGROUND

Tumor necrosis factor β (TNF β), also known as lymphotoxin, is a pleiotropic cytokine that has a molecular weight of 25 kDa. TNF α , also known as cachectin, is a smaller cytokine with a molecular weight of 17 kDa 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 percent 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 (55 kDa) and 2 (75 kDa) to be killed, with the p55 receptor mediating the cytotoxic response.

REFERENCES

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SOURCE

TNF β (hBA-171) is produced in *E. coli* as 18.6 kDa biologically active protein corresponding to 171 amino acids of TNF β of human origin.

PRODUCT

TNF β (hBA-171) is purified from bacterial lysates (>98%); supplied as 20 μ g purified protein.

BIOLOGICAL ACTIVITY

TNF β (hBA-171) is biologically active as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D.

Expected ED₅₀: <0.05 ng/ml.

Specific Activity: Greater than 2 x 10⁷ units/mg

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

PROTOCOLS

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