Recombinant Human TNF

Product Information

Material Number: 554618
Size: 10 µg
Concentration: 200 µg/ml
Reactivity: QC Testing: Human
Storage Buffer: Frozen aqueous buffered solution containing BSA.

Description

Tumor Necrosis Factor (TNF, also known as TNF-α) is a potent lymphoid factor which exerts cytotoxic effects on a wide range of tumor cells and certain other target cells. Human TNF is a 17.5 kD protein containing 157 amino acid residues. Recombinant human TNF (Cat. No. 554618) is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered aqueous buffered solution containing bovine serum albumin, with no preservatives. Recombinant human TNF is ≥ 95% pure as determined by SDS-PAGE, and an absorbance assay based on the Beers-Lambert law. The endotoxin level is ≤ 0.1 ng/µg of human TNF, as measured in a chromogenic LAL assay.

Preparation and Storage

Store product at -80°C prior to use or for long term storage of stock solutions. Rapidly thaw and quick-spin product prior to use. Avoid multiple freeze-thaws of product. This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Recommended Assay Procedure:

Upon initial thawing, recombinant human TNF (Cat. No. 554618) should be aliquoted into polypropylene microtubes and frozen at -80°C for future use. Alternatively, the product can be diluted in sterile neutral buffer containing not less than 0.5-10 mg/mL carrier protein, such as human or bovine albumin, aliquoted and stored at -80°C. For in vitro biological assay use, carrier-protein concentrations of ≥ 1 mg/mL are recommended. For use as an ELISA standard, carrier-protein concentrations of 5-10 mg/mL are recommended. Failure to add carrier protein or store at indicated temperatures may result in a loss of activity. Carrier proteins should be pre-screened for possible effects in each investigator's experimental system. Carrier proteins may have an undesired influence on experimental results due to toxicity, high endotoxin levels or possible blocking activity.

ELISA Standard: Recombinant human TNF (Cat. No. 554618) can be useful as a quantitative standard for measuring human TNF protein levels using sandwich ELISA with the purified MAb1 antibody (Cat. No. 551220) as a capture antibody and biotinylated MAb11 antibody (Cat. No. 554511) as the detection antibody. To obtain linear standard curves, investigators may want to consider using doubling dilutions of recombinant human TNF standard from 2000-15 pg/mL to be included in each ELISA plate. For measuring human TNF in serum or plasma, investigators are highly encouraged to use BD OptEIA™ Human TNF ELISA Set (Cat. No. 555212) or BD OptEIA™ Human TNF ELISA Kit II (Cat. No. 550610).

Bioassay: Investigators are advised that the Bioassay application is not routinely tested for this material and are highly encouraged to both titrate this material and include appropriate controls in relevant experiments. An activity range of 0.05 - 2.0 x 10^9 units/mg, encompassing an ED50= 5-200 pg/mL, has previously been reported using L929 as indicator cells in a cytolysis assay, with a unit defined as the amount of material needed to stimulate a half-maximal response at cytokine saturation.

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>551220</td>
<td>Purified Mouse Anti-Human TNF</td>
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<td>MAb1</td>
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<td>551446</td>
<td>Human TNF-a ELISPOT Set</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References