

Datasheet for 009-F01-W31-0050**rHuman TNF alpha Protein****Overview**

Description:	Human Tumor Necrosis Factor alpha Recombinant Protein (Animal Free) - 009-F01-W31-0050
Item No.:	009-F01-W31-0050
Size:	50 µg
Applications:	SDS-PAGE, Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Tumor Necrosis Factor alpha (TNF α) is an inflammatory cytokine secreted by macrophages, monocytes, neutrophils, T cells, NK-cells following their stimulation by bacterial LPS. TNF α activates signals through two receptors, TNFR1, which is expressed on most cell types, and TNFR2, which is expressed mainly on immune cells. TNF α can have many functions including, to stimulate of phagocytosis in macrophages, to chemoattract neutrophils, to increase insulin resistance and to induce fever. Recombinant human TNF- α is a non-glycosylated protein, containing 158 amino acids, with a molecular weight of 17.5 kDa.
Synonyms:	TNFSF2, Cachectin, DIF, Necrosin, Cytotoxin, Cachexin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	TNF
Purity/Specificity:	Tumor Necrosis Factor alpha is produced with no animal-derived raw products, animal free equipment and animal free protocols. Purity was determined to be greater than 96% as determined by reducing and non-reducing SDS-PAGE.
Relevant Links:	• UniProtKB - P01375

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Cellular Assay (Based on references)
Application Note:	Tumor Necrosis Factor alpha Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Tumor Necrosis Factor alpha in immunological assays.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/ μ g protein. Biologic Activity: The activity is determined by the cytolysis of mouse L929 cells in the presence of Actinomycin D and is typically less than 0.05 ng/mL.

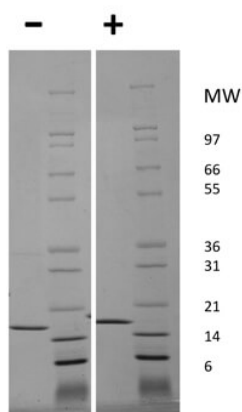
Formulation

Physical State:	Lyophilized
Concentration:	0.1 mg/mL neat
Buffer:	0.01 M Sodium Phosphate, pH 7.5
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	50 μ L
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

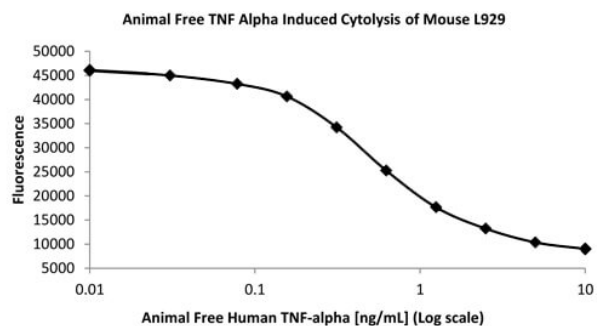
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE

SDS-PAGE of Human Tumor Necrosis Factor alpha Animal Free Recombinant Protein. Lane 1: 1 µg Human TNF alpha AF in non-reducing conditions (-). Lane 2: Molecular weight marker. Lane 3: 1 µg Human TNF alpha AF in reducing conditions (+). Lane 4: Molecular weight marker. Human TNF alpha AF has a predicted MW of 17.5 kDa.



SDS-PAGE

Bioactivity of Human Tumor Necrosis Factor alpha Animal Free Recombinant Protein. Serial dilutions of Human TNF alpha AF, starting at 10 ng/mL, were added to 929 cells growing in the presence of 1 µg/mL actinomycin D. Cell viability was measured after 48 hours and the linear portion of the curve was used to calculate the ED50. The ED50 of Human AF TNF alpha AF is between 0.4-0.6 ng/mL.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.