Cell Therapy Systems
Recombinant Human Tumor Necrosis Factor-α CTS™ (TNF-α)

PRODUCT ANALYSIS SHEET

Catalog Number:	CTP3011	CTP3013
Quantity:	100 µg	1 mg

Lot Number: See product label

Molecular Weight: 17.5 kDa

Purity: >95% as determined by SDS-PAGE analysis.

Amino Acid Sequence: VRSSSRTPSD KPVAHVVANP QAEGQLQWLN RRANALLANG VELRDNQLVV PSEGLYLIYS QVLFKGQGCP STHVLLTHTI SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL GGVFQLEKGD RLSAEINRPD YLDFAESGQV YFGIIAL

Biological Activity: ED_{50} range = 0.02 to 0.05 ng/mL (Specific Activity: 2 x 10^7 to 5 x 10^7 units/mg), determined by the dose dependent cytotoxic effect on L929 cells in the presence of actinomycin D.

Formulation: Lyophilized, carrier free.

Sterility: Filtered prior to lyophilization through a 0.22 micron sterile filter.

Endotoxin: <0.1 ng/µg

Production: Recombinant human TNF-α is produced in *E. coli* and purified via sequential chromatography.

Reconstitution Recommendation: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute lyophilized recombinant human TNF-α in sterile, distilled water to a concentration of 0.1 to 1.0 mg/mL. Further dilutions should be made in low endotoxin medium or a buffered solution containing a carrier protein such as heat inactivated tissue culture grade HSA. It is recommended that all culture media containing supplements, such as growth factor, be sterile filtered prior to use for cell, gene, or tissue-based applications to minimize risk of contamination.

Suggested Working Dilutions: The optimal concentration should be determined for each specific application.

Storage: Lyophilized human TNF-α should be stored at 2 to 8°C, preferably desiccated. Store reconstituted human TNF-α at ≤−20°C (not in a frost-free freezer). Keep freeze-thaw cycles to a minimum.

Expiration Date: Expires one year from date of receipt when stored as instructed.

References:

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For Research Use or Non-Commercial Manufacturing of Cell Based Products for Clinical Research.
CAUTION: Not intended for direct administration into humans or animals

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Manufactured under ISO 13485 Quality Standard

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For technical support or support related to CTS™ products, www.invitrogen.com/celltherapysupport

PICTS-Hu TNF-α (Rev 07/10) DCC-10-1460

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Rodriguez, P., M. Heyman, C. Candalh, M.A. Blaton, and C. Bouchaud (1995) Tumour necrosis factor-alpha induces morphological and functional alterations of intestinal HT29 cl.19A cell monolayers. Cytokine 7(5):441-448.

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Shields, D.C., N.G. Avgeropoulos, N.L. Banik, and W.R. Tyor (2000) Acute multiple sclerosis characterized by extensive mononuclear phagocyte infiltration. Neurochemical Research 25(11):1517-1520.

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Explanation of symbols

Symbol	Description	Symbol	Description
REF	Catalogue Number	LOT	Batch code
RUO	Research Use Only	IVD	*In vitro* diagnostic medical device
	Use by		Temperature limitation
	Manufacturer	EC REP	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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