

Active Recombinant Human Lymphotoxin Alpha (TNF Superfamily, Member 1)

Cat. No. LTA-165H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human lymphotoxin Alpha (TNF Superfamily, Member 1) encoding the human Lymphotoxin alpha (LT-a) protein sequence (containing the signal peptide sequence, and the mature human Lymphotoxin alpha sequence) was expressed in modified human 293 cells.
Species	Human
Source	HEK293
Description	Lymphotoxin-alpha (LT-a) is a pro-inflammatory cytokine expressed in activated T cells, B cells, natural killer cells, as well as some non-hematopoietic cells. Activation signals include bacterial products, virus infection, T cell receptor activation, crosslinking of surface immunoglobulin (Ig) on B-lymphocytes, and exposure to UV light in epithelial cells. LT-a regulates a variety of biological processes including cell proliferation, apoptosis, coagulation and lipid metabolism.
Amino Acid Sequence	LPGVGLTPSAAQTARQHPKMHLAHSNLKPAAHLIGDPSKQNSLLWRANTDRAFLQD GFSLSNNSLLVPTSGIYFVYSQVVFSGKAYSPKATSSPLYLAHEVQLFSSQYPFHVPL LSSQKMVYPGLQEPWLHSMYHGAAFLTQGDQLSTHTDGIPHLVLPSTVFFGAFA L.
Molecular Mass	Lymphotoxin-alpha migrates as a broad band between 20 and 25 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with

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	the unmodified Lymphotoxin-alpha that has a predicted molecular mass of 18.7kDa.
pI	Lymphotoxin-alpha separates into a number of isoforms with a pI between 6 and 9 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified Lymphotoxin-alpha that has a predicted pI of 8.94.
% Carbohydrate	Purified Lymphotoxin-alpha consists of 0-25% carbohydrate.
Glycosylation	Lymphotoxin-alpha contains N-linked and possibly O-linked oligosaccharides.
Purity	>95%, as determined by SDS-PAGE and visualized by Coomassie Brilliant Blue.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
Activity	The ED50 of Lymphotoxin-alpha is typically 0.05 - 0.07 ng/ml as measured in acytotoxicity assay using the murine WEHI 164 cell line in the presence of actinomycin D.

GENE INFORMATION

Gene Name	LTA lymphotoxin alpha (TNF superfamily, member 1) [Homo sapiens]
Synonyms	LTA; lymphotoxin alpha (TNF superfamily, member 1); LT; TNFB; TNFSF1;

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	lymphotoxin alpha; OTTHUMP00000165897; tumor necrosis factor beta; Tumor necrosis factor ligand superfamily member 1; TNF-beta; LT-alpha
Gene ID	4049
mRNA Refseq	NM_000595
Protein Refseq	NP_000586
UniProt ID	P01374
Chromosome Location	6p21.3
MIM	153440
Pathway	Antigen processing and presentation; Cytokine-cytokine receptor interaction; Type I diabetes mellitus
Function	cytokine activity; tumor necrosis factor receptor binding

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on 1tnr.



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