TNF-beta Human Active Protein

PRODUCT OVERVIEW

Product Name	TNF-beta, Active Protein
Full Product Name	Human TNF-beta
Product Gene Name	TNF-beta active protein
Product Synonym Names	Recombinant Human TNF-beta
Sequence	MLPGVGLTPS AAQTARQHPK MHLAHSTLKP AAHLIGDPSK QNSLLW RANT DRAFLQDGFS LSNNSLLVPT SGIYFVYSQV VFSGKAYSPK A TSSPLYLAH EVQLFSSQYP FHVPLLSSQK MVYPGLQEPW LHSMYHG AAF QLTQGDQLST HTDGIPHLVL SPSTVFFGAF AL
Host	E Coli
Species Reactivity	Human
Form/Format	Lyophilized
Purity/Purification	> 98% by SDS-PAGE and HPLC analyses
Molecular Weight	18.6 kDa
Chromosome Location	Chromosome: 6; NC_000006.12 (31572099..31574324). Location: 6p21.3
OMIM	153440
3D Structure	ModBase 3D Structure for P01374
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Endotoxin Level	< 0.1 ng per g of TNF-beta
Biological Activity	The ED50 as determined by the cytolysis of murine L929 cells in the presence of Actinomycin-D is <= 0.05 ng/ml, corresponding to a specific activity of >= 2 x 107 units/mg.
Product Categories/Family for TNF-beta active protein	Cytokines & Growth Factors
ISO Certification	Manufactured in an ISO 9001:2008 Certified Laboratory.
Related Product Information for TNF-beta active protein	TNF-beta is a potent mediator of inflammatory and immune responses. It belongs to the TNF family of ligands and signals through TNFR1 and TNFR2. TNF-beta is produced by activated T and B lymphocytes, and has similar activities to TNF-alpha. Like TNF-alpha, TNF-beta is involved in the regulation of various biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, coagulation, and neurotransmission. TNF-beta is secreted as a soluble polypeptide, but can form heterotrimers with lymphotoxin-beta, which effectively anchors the TNF-beta to the cell surface. TNF-beta is cytotoxic to a wide range of tumor cells. Recombinant human TNF-beta is a secreted 171 amino acid protein (18.6 kDa) which forms an active non-disulfide linked homotrimer structure in solution.
Other Notes	Small volumes of TNF-beta active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TNF-beta purchase	MBS691910 is an active protein targeting TNF-beta. Also known as Human TNF-beta. Reactive in Human. Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TNF-beta. It may not necessarily be applicable to this product.

NCBI GI #	6806893
NCBI GeneID	4049
NCBI Accession #	NP_000586.2
UniProt Primary Accession #	P01374
UniProt Secondary Accession #	Q8N4C3; Q9UKS8
UniProt Related Accession #	P01374
GenBank Nucleotide #	NM_000595.3
NCBI Official Full Name	lymphotoxin-alpha
NCBI Official Synonym Full Names	lymphotoxin alpha
NCBI Official Symbol	LTA
NCBI Official Synonym Symbols	LT; TNFB; TNFSF1
UniProt Protein Name	Lymphotoxin-alpha
UniProt Synonym Protein Names	TNF-beta; Tumor necrosis factor ligand superfamily member 1
Protein Family	Lymphotoxin
UniProt Gene Name	LTA
UniProt Synonym Gene Names	TNFB; TNFSF1; LT-alpha
UniProt Entry Name	TNFB_HUMAN
NCBI Protein Information	lymphotoxin-alpha; LT-alpha; TNF-beta; TNF superfamily, member 1; tumor necrosis factor beta; tumor necrosis factor ligand superfamily member 1
NCBI Summary for TNF-beta	The encoded protein, a member of the tumor necrosis factor family, is a cytokine produced by lymphocytes. The protein is highly inducible, secreted, and forms heterotrimers with lymphotoxin-beta which anchor lymphotoxin-alpha to the cell surface. This protein also mediates a large variety of inflammatory, immunostimulatory, and antiviral responses, is involved in the formation of secondary lymphoid organs during development and plays a role in apoptosis. Genetic variations in this gene are associated with susceptibility to leprosy type 4, myocardial infarction, non-Hodgkin's lymphoma, and psoriatic arthritis. Alternatively spliced transcript variants have been observed for this gene. [provided by RefSeq, Jul 2012]

UniProt Comments for TNF-beta	Function: Cytokine that in its homotrimeric form binds to TNFRSF1A/TNFR1, TNFRSF1B/TNFBR and TNFRSF14/HVEM. In its heterotrimeric form with LTB binds to TNFRSF3/LTBR. Lymphotoxin is produced by lymphocytes and cytotoxic for a wide range of tumor cells in vitro and in vivo. Subunit structure: Homotrimer, and heterotrimer of either two LTB and one LTA subunits or (less prevalent) two LTA and one LTB subunits. Subcellular location: Secreted. Membrane. Note: The homotrimer is secreted. The heterotrimer is membrane-associated. Polymorphism: A polymorphism in LTA accounts, in part, for susceptibility to leprosy linked to chromosome 6p21.3 (LPRS4) [MIM:610988]. Involvement in disease: Psoriatic arthritis (PSORAS) [MIM:607507]: An inflammatory, seronegative arthritis associated with psoriasis. It is a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoid like pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).Note: Disease susceptibility is associated with variations affecting the gene represented in this entry. Sequence similarities: Belongs to the tumor necrosis factor family.
Research Articles on TNF-beta	**1.** single nucleotide polymorphisms in lymphotoxin alpha and TNF-alpha are not associated with migraine.
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