TGFB1 Antibody (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	TGFB1, Blocking Peptide
Full Product Name	TGFB1 Antibody (N-term) Blocking peptide
Product Gene Name	TGFB1 blocking peptide
Product Synonym Gene Name	TGFB
Product Synonym Names	Transforming growth factor beta-1; TGF-beta-1; Latency-associated peptide; LAP; TGFB1; TGFB
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	TGFB1 peptide (MBS9219052) is used for blocking the activity of TGFB1 antibody (MBS9200879)
Molecular Weight	44,341 Da
OMIM	131300
Cellular Location	Secreted, extracellular space, extracellular matrix
Tissue Location	Highly expressed in bone. Abundantly expressed in articular cartilage and chondrocytes and is increased in osteoarthritis (OA). Colocalizes with ASPN in chondrocytes within OA lesions of articular cartilage.
Related Product Information for TGFB1 blocking peptide	Multifunctional protein that controls proliferation, differentiation and other functions in many cell types. Many cells synthesize TGFB1 and have specific receptors for it. It positively and negatively regulates many other growth factors. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts.
Other Notes	Small volumes of TGFB1 blocking peptide 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 TGFB1 purchase	MBS9219052 is a blocking peptide targeting TGFB1. Also known as TGFB1 Antibody (N-term) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TGFB1. It may not necessarily be applicable to this product.

NCBI GI #	135674
NCBI GeneID	7040
NCBI Accession #	P01137.2
UniProt Primary Accession #	P01137
UniProt Secondary Accession #	Q9UCG4; A8K792
UniProt Related Accession #	P01137
NCBI Official Full Name	Transforming growth factor beta-1
NCBI Official Synonym Full Names	transforming growth factor beta 1
NCBI Official Symbol	TGFB1
NCBI Official Synonym Symbols	CED; LAP; DPD1; TGFB; TGFbeta

UniProt Protein Name	Transforming growth factor beta-1
Protein Family	Transforming growth factor
UniProt Gene Name	TGFB1
UniProt Synonym Gene Names	TGFB; TGF-beta-1; LAP
UniProt Entry Name	TGFB1_HUMAN
NCBI Protein Information	transforming growth factor beta-1
NCBI Summary for TGFB1	This gene encodes a member of the transforming growth factor beta (TGFB) family of cytokines, which are multifunctional peptides that regulate proliferation, differentiation, adhesion, migration, and other functions in many cell types. Many cells have TGFB receptors, and the protein positively and negatively regulates many other growth factors. The secreted protein is cleaved into a latency-associated peptide (LAP) and a mature TGFB1 peptide, and is found in either a latent form composed of a TGFB1 homodimer, a LAP homodimer, and a latent TGFB1-binding protein, or in an active form composed of a TGFB1 homodimer. The mature peptide may also form heterodimers with other TGFB family members. This gene is frequently upregulated in tumor cells, and mutations in this gene result in Camurati-Engelmann disease.[provided by RefSeq, Oct 2009]

UniProt Comments for TGFB1	TGFB1: Multifunctional protein that controls proliferation, differentiation and other functions in many cell types. Many cells synthesize TGFB1 and have specific receptors for it. It positively and negatively regulates many other growth factors. It plays an important role in bone remodeling as it is a potent stimulator of osteoblastic bone formation, causing chemotaxis, proliferation and differentiation in committed osteoblasts. Homodimer; disulfide-linked, or heterodimer with TGFB2. Secreted and stored as a biologically inactive form in the extracellular matrix in a 290 kDa complex (large latent TGF-beta1 complex) containing the TGFB1 homodimer, the latency-associated peptide (LAP), and the latent TGFB1 binding protein-1 (LTBP1). The complex without LTBP1 is known as the'small latent TGF-beta1 complex'. Dissociation of the TGFB1 from LAP is required for growth factor activation and biological activity. Release of the large latent TGF-beta1 complex from the extracellular matrix is carried out by the matrix metalloproteinase MMP3. May interact with THSD4; this interaction may lead to sequestration by FBN1 microfibril assembly and attenuation of TGFB signaling. Interacts with the serine proteases, HTRA1 and HTRA3: the interaction with either inhibits TGFB1-mediated signaling. The HTRA protease activity is required for this inhibition. Interacts with CD109, DPT and ASPN. Activated in vitro at pH below 3.5 and over 12.5. Highly expressed in bone. Abundantly expressed in articular cartilage and chondrocytes and is increased in osteoarthritis (OA). Co-localizes with ASPN in chondrocytes within OA lesions of articular cartilage. Belongs to the TGF-beta family. Protein type: Motility/polarity/chemotaxis; Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 19q13.1 Cellular Component: cell surface; cytoplasm; extracellular region; extracellular space; Golgi lumen; microvillus; nucleus; plasma membrane; proteinaceous extracellular matrix Molecular Function: antigen binding; cytokine activity; enzyme binding; glycoprotein binding; protein binding; punt binding; transforming growth factor beta receptor binding Biological Process: active induction of host immune response by virus; ATP biosynthetic process; cell cycle arrest; cell migration; chondrocyte differentiation; common-partner SMAD protein phosphorylation; connective tissue replacement during inflammatory response; epidermal growth factor receptor signaling pathway; epithelial to mesenchymal transition; evasion of host defenses by virus; hemopoietic progenitor cell differentiation; hyaluronan catabolic process; inflammatory response; intercellular junction assembly and maintenance; lipopolysaccharide-mediated signaling pathway; lymph node development; MAPKKK cascade; mitotic cell cycle checkpoint; negative regulation of blood vessel endothelial cell migration; negative regulation of cell cycle; negative regulation of cell differentiation; negative regulation of cell growth; negative regulation of cell proliferation; negative regulation of cell-cell adhesion; negative regulation of DNA replication; negative regulation of epithelial cell proliferation; negative regulation of fat cell differentiation; negative regulation of mitotic cell cycle; negative regulation of myoblast differentiation; negative regulation of protein amino acid phosphorylation; negative regulation of skeletal muscle development; negative regulation of transcription, DNA-dependent; negative regulation of transforming growth factor beta receptor signaling pathway; phosphate metabolic process; platelet degranulation; positive regulation of blood vessel endothelial cell migration; positive regulation of bone mineralization; positive regulation of cell migration; positive regulation of cell proliferation; positive regulation of cellular protein metabolic process; positive regulation of chemotaxis; positive regulation of collagen biosynthetic process; positive regulation of interleukin-17 production; positive regulation of isotype switching to IgA isotypes; positive regulation of MAP kinase activity; positive regulation of peptidyl-serine phosphorylation; positive regulation of peptidyl-tyrosine phosphorylation; positive regulation of phosphoinositide 3-kinase activity; positive regulation of protein amino acid dephosphorylation; positive regulation of protein amino acid phosphorylation; positive regulation of protein complex assembly; positive regulation of protein import into nucleus; positive regulation of protein kinase B signaling cascade; positive regulation of protein secretion; positive regulation of superoxide release; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-dependent; positive regulation of vascular permeability; protein amino acid phosphorylation; protein export from nucleus; protein import into nucleus, translocation; protein kinase B signaling cascade; receptor catabolic process; regulation of apoptosis; regulation of binding; regulation of cell migration; regulation of DNA binding; regulation of protein import into nucleus; regulation of striated muscle development; regulation of transforming growth factor beta receptor signaling pathway; response to estradiol stimulus; response to progesterone stimulus; response to wounding; salivary gland morphogenesis; SMAD protein complex assembly; SMAD protein nuclear translocation; transforming growth factor beta receptor signaling pathway Disease: Camurati-engelmann Disease; Cystic Fibrosis
Research Articles on TGFB1	**1.** TGF-beta/beta2-spectrin/CTCF-regulated tumor suppression in human stem cell disorder Beckwith-Wiedemann syndrome.

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