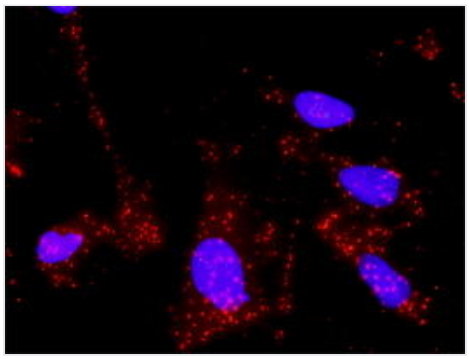
TGFB1 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	TGFB1, Monoclonal Antibody
Full Product Name	TGFB1 (Transforming Growth Factor, beta 1, CED, DPD1, TGFB, TGFbeta) (HRP)
Product Gene Name	anti-TGFB1 antibody
Product Synonym Names	Transforming Growth Factor; beta 1; CED; DPD1; TGFB; TGFbeta
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Number	X1
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with horseradish peroxidase (HRP).
Purity/Purification	Purified
Specificity	Recognizes TGFB1.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in as Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original and prior to removing the cap.
Molecular Weight	12.9 kDa (113aa), confirmed by MALDI-TOF.
OMIM	131300
3D Structure	ModBase 3D Structure for P01137
Immunogen	TGFB1 (NP_000651, 279aa-390aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	ALDTNYCFSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANFCLGPCPYIWSLDTQYSKVLALYNQHNPGASAAPCCVPQALEPLPIVYYVGRKPKVEQ
Conjugate	HRP
Product Categories/Family for anti-TGFB1 antibody	Antibodies; Peptides
Applications Tested/Suitable for anti-TGFB1 antibody	ELISA (EIA), In situ Proximity Ligation Assay (Cell)
Application Notes for anti-TGFB1 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-TGFB1 antibody	MBS6182972 is an antibody targeting TGFB1. Also known as TGFB1 (Transforming Growth Factor, beta 1, CED, DPD1, TGFB, TGFbeta) (HRP). Host
Other Notes	Small volumes of anti-TGFB1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If neces 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 apply.



Testing Data of anti-TGFB1 antibody
Proximity Ligation Analysis of protein-protein interactions between MMP2 and TGFB1 HeLa cells were stained with anti-MMP2 rabbit purified polyclonal 1:1200 and anti-TGFB1 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

ADDITIONAL DETAILS

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

NCBI GI #	63025222
NCBI GeneID	7040
NCBI Accession #	NP_000651
UniProt Primary Accession #	P01137
UniProt Secondary Accession #	Q9UCG4; A8K792
UniProt Related Accession #	P01137
GenBank Nucleotide #	NM_000660.6
NCBI Official Full Name	transforming growth factor beta-1 preproprotein
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 secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate a latency-associated peptide (LAP) and a mature peptide, and is found in either a latent form composed of a mature peptide homodimer, a LAP homodimer, and a latent TGF-beta binding protein, or in an active form consisting solely of the mature peptide homodimer. The mature peptide may also form heterodimers with other TGFB family members. This encoded protein regulates cell proliferation, differentiation and growth, and can modulate expression and activation of other growth factors including interferon gamma and tumor necrosis factor alpha. This gene is frequently upregulated in tumor cells, and mutations in this gene result in Camurati-Engelmann disease. [provided by RefSeq, Aug 2016]

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: extracellular space; proteinaceous extracellular matrix; microvillus; cell surface; cell soma; Golgi lumen; axon; cytoplasm; extracellular region; plasma membrane; nucleus

Molecular Function: protein binding; protein homodimerization activity; enzyme binding; growth factor activity; protein heterodimerization activity; punt binding; cytokine activity; protein N-terminus binding; glycoprotein binding; antigen binding

Biological Process: extracellular matrix organization and biogenesis; positive regulation of apoptosis; positive regulation of transcription, DNA-dependent; SMAD protein nuclear translocation; female pregnancy; positive regulation of protein amino acid dephosphorylation; activation of NF-kappaB transcription factor; regulation of protein import into nucleus; positive regulation of MAP kinase activity; connective tissue replacement during inflammatory response; regulation of transforming growth factor beta receptor signaling pathway; negative regulation of ossification; cell cycle arrest; inner ear development; positive regulation of isotype switching to IgA isotypes; regulatory T cell differentiation; response to drug; positive regulation of interleukin-17 production; positive regulation of chemotaxis; positive regulation of smooth muscle cell differentiation; active induction of host immune response by virus; positive regulation of blood vessel endothelial cell migration; regulation of sodium ion transport; negative regulation of blood vessel endothelial cell migration; negative regulation of fat cell differentiation; lymph node development; positive regulation of protein secretion; positive regulation of transcription from RNA polymerase II promoter; response to progesterone stimulus; endoderm development; myelination; positive regulation of odontogenesis; negative regulation of phagocytosis; evasion of host defenses by virus; positive regulation of cellular protein metabolic process; myeloid dendritic cell differentiation; negative regulation of transcription from RNA polymerase II promoter; phosphate metabolic process; negative regulation of cell proliferation; negative regulation of T cell proliferation; ureteric bud development; regulation of DNA binding; negative regulation of release of sequestered calcium ion into cytosol; salivary gland morphogenesis; positive regulation of cell proliferation; protein kinase B signaling cascade; protein export from nucleus; inflammatory response; positive regulation of exit from mitosis; aging; epidermal growth factor receptor signaling pathway; mitotic cell cycle checkpoint; common-partner SMAD protein phosphorylation; positive regulation of phosphoinositide 3-kinase activity; positive regulation of bone mineralization; positive regulation of peptidyl-serine phosphorylation; SMAD protein complex assembly; positive regulation of protein kinase B signaling cascade; positive regulation of protein complex assembly; positive regulation of protein import into nucleus; response to hypoxia; epithelial to mesenchymal transition; negative regulation of cell growth; negative regulation of cell-cell adhesion; negative regulation of transforming growth factor beta receptor signaling pathway; negative regulation of skeletal muscle development; mononuclear cell proliferation; regulation of cell migration; protein amino acid phosphorylation; hyaluronan catabolic process; regulation of apoptosis; response to vitamin D; negative regulation of neuroblast proliferation; receptor catabolic process; positive regulation of superoxide release; transforming growth factor beta receptor signaling pathway; germ cell migration; response to glucose stimulus; chondrocyte differentiation; defense response to fungus, incompatible interaction; T cell homeostasis; negative regulation of mitotic cell cycle; cell growth; tolerance induction to self antigen; regulation of striated muscle development; platelet activation; organ regeneration; negative regulation of DNA replication; virus-host interaction; hemopoietic progenitor cell differentiation; negative regulation of transcription, DNA-dependent; positive regulation of epithelial cell proliferation; positive regulation of collagen biosynthetic process; viral infectious cycle; response to estradiol stimulus; negative regulation of cell cycle; positive regulation of histone deacetylation; response to radiation; platelet degranulation; negative regulation of protein amino acid phosphorylation; lipopolysaccharide-mediated signaling pathway; response to wounding; adaptive immune response based on somatic recombination of immune receptors built from immunoglobulin superfamily domains; negative regulation of epithelial cell proliferation; intercellular junction assembly and maintenance; regulation of binding; MAPKKK cascade; cellular calcium ion homeostasis; gut development; protein import into nucleus, translocation; ATP biosynthetic process; positive regulation of histone acetylation; positive regulation of protein amino acid phosphorylation; negative regulation of myoblast differentiation; blood coagulation; positive regulation of cell migration

Research Articles on TGFB1	**1.** The C allele of TGF-beta1 869T/C polymorphism, correlated with high plasma TGF-beta1 level, represented an independent risk factor for BMS-ISR in Chinese Han patients with coronary artery disease.
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