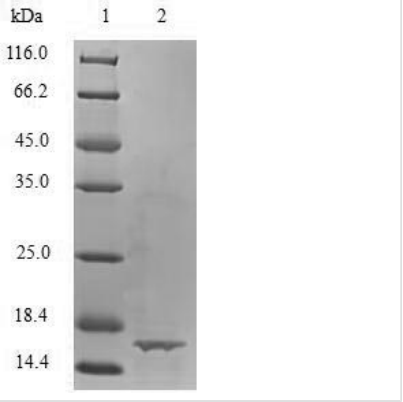
Recombinant Bovine Transforming growth factor beta-1 proprotein (TGFB1), partial

Product Code	CSB-EP023446BO
Relevance	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 rodeling as it is a potent stimulator of osteoblastic bone formation, causing chotaxis, proliferation and differentiation in committed osteoblasts. Can promote either T-helper 17 cells (Th17) or regulatory T-cells (Treg) lineage differentiation in a concentration-dependent manner. At high concentrations, leads to FOXP3-mediated suppression of RORC and down-regulation of IL-17 expression, favoring Treg cell development. At low concentrations in concert with IL-6 and IL-21, leads to expression of the IL-17 and IL-23 receptors, favoring differentiation to Th17 cells.
Abbreviation	Recombinant Bovine TGFB1 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P18341
Product Type	Recombinant Protein
Immunogen Species	Bos taurus (Bovine)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	ALDTNYCFSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANFCLGPCPYIWS LDTQYSKVLALYNQHNPGASAAPCCVPQALEPLPIVYYVGRKPKVEQLSNMIV RSCKCS
Research Area	Others
Source	E.coli
Target Names	TGFB1
Expression Region	279-390aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	16.8kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The DNA fragment encoding the 279-390aa of the Bovine TGFB1 protein was fused with N-terminal 6xHis tag gene and then was inserted into the expression vector, which was subsequently transformed into the E.coli for expression. The resulting product was further purified to obtain the recombinant Bovine TGFB1 protein. The purity of this recombinant TGFB1 protein is greater than 90% assessed by Bandscan software analysis combined with SDS-PAGE. This recombinant TGFB1 protein showed a band on the gel with a molecular weight of approximately 17 kDa.

TGFB1 is a gene encoding a protein named transforming growth factor beta-1 (TGFβ-1) and belongs TGF-beta family. TGFβ-1 is a multifunctional secreted protein that controls cell growth, cell proliferation, cell differentiation and other functions in many cell types. Almost every cell in the body produces TGFβ-1 and has its receptor. In term of immune system, TGFβ-1 plays an important role in tumorigenesis and metastasis.In the early stage of tumorigenesis, TGFb1 mainly plays an anti-cancer effect. TGFβ-1 has an inhibitory effect on the growth and proliferation of most cells. However, in the middle and late stages of the tumor, the TGFβ-1 receptors on the plasma membrane of tumor cells are reduced or absent, which results in tolerance to the growth inhibitory signal of TGFb1, and the proliferation of tumor cells is no longer restricted by the inhibitory effect of TGFβ-1.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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