# abcam

# Product datasheet

# Recombinant human TGF beta 1 protein (Active) ab50036

44 References 画像数 1

製品の詳細

製品名 Recombinant human TGF beta 1 protein (Active)

生理活性 The ED<sub>50</sub>, as determined by TGF-beta1's ability to inhibit the mouse IL-4-dependent proliferation

of mouse HT-2 cells, is  $\leq$  0.05 ng/ml), corresponding to a specific activity of  $\geq$  2 x 10<sup>7</sup> units/mg.

精製度 > 98 % SDS-PAGE.

> 98% by HPLC analyses. Endotoxin Level: < 0.1 ng/µg of protein (< 1 EU/µg).

エンドトキシン・レベル < 1.000 Eu/μg 発現系 HEK 293 cells

アクセッション番号 <u>P01137</u>

タンパク質長 Protein fragment

Animal free No

**由来** Recombinant

**生物種** Human

配列 ALDTNYCFSS TEKNCCVRQL YIDFRKDLGW

KWIHEPKGYH ANFCLGPCPY IWSLDTQYSK VLALYNQHNP GASAAPCCVP QALEPLPIVY

YVGRKPKVEQ LSNMIVRSCK CS

予測される分子量25 kDa領域279 to 390

配列の追加情報 TGF-beta1 is a 25.0 kDa protein with each subunit containing 112 aa, linked by a single disulfide

bond. It is the mature protein after cleavage of the signal peptide and latency-associated peptide.

特性

Our Abpromise guarantee covers the use of ab50036 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション HPLC

Cell Culture SDS-PAGE

Functional Studies

Western blot

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製品の状態

Lyophilized

備考

TGF-beta is secreted predominantly as latent complexes which are stored at the cell surface and

in the extracellular matrix.

The release of biologically active TGF- $\beta$  isoform from a latent complex involves proteolytic processing of the complex and /or induction of conformational changes by proteins such as

thrombospondin-1.

TGF-β1 is the most abundant isoform secreted by almost every cell type.

## 前処理および保存

#### 保存方法および安定性

Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

再構成

Centrifuge the vial prior to opening. Reconstitute in 10mM Citric Acid, pH3.0 to a concentration of  $50 \,\mu\text{g/ml}$  (e.g.  $5 \,\mu\text{g}/100 \,\mu\text{l}$ ). This solution can then be stored at 4oC to 8oC for up to 1 week or prepared for extended storage. It is recommended that further dilutions be made in PBS with 0.1% BSA and stored at -20oC for future use.

#### 関連情報

機能

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.

組織特異性

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.

関連疾患

Defects in TGFB1 are the cause of Camurati-Engelmann disease (CE) [MIM:131300]; also known as progressive diaphyseal dysplasia 1 (DPD1). CE is an autosomal dominant disorder characterized by hyperostosis and sclerosis of the diaphyses of long bones. The disease typically presents in early childhood with pain, muscular weakness and waddling gait, and in some cases other features such as exophthalmos, facial paralysis, hearing difficulties and loss of vision.

配列類似性

Belongs to the TGF-beta family.

翻訳後修飾

Glycosylated.

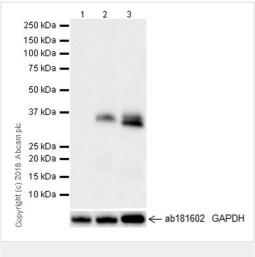
The precursor is cleaved into mature TGF-beta-1 and LAP, which remains non-covalently linked to

mature TGF-beta-1 rendering it inactive.

細胞内局在

Secreted > extracellular space > extracellular matrix.

#### 画像



Western blot - Recombinant human TGF beta 1 protein (Full length) (ab50036)

**All lanes :** Anti-CTGF antibody [EPR20728] (ab209780) at 1/1000 dilution

**Lane 1 :** NIH/3T3 (mouse embryonic fibroblast) starved for 18 hours, whole cell lysate

**Lane 2 :** NIH/3T3 starved for 18 hours, then treated with 10 ng/ml transforming growth factor-ß (TGF-ß1, ab50036) and 50  $\mu$ g/ml Heparin sodium salt for 24 hours, whole cell lysate

**Lane 3 :** HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes :** Goat Anti-Rabbit lgG H&L (HRP) (<u>ab97051</u>) at 1/100000 dilution

## Blocking/Dilution buffer and concentration: 5% NFDM/TBST.

The level of CTGF expression can be induced by TGF beta treatment (PMID: 17786299).

CTGF is constitutively expressed in HepG2 cells (PMID:15886528).

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