

Product datasheet

Anti-TGF beta 1 antibody [EPR18163] ab179695

KO VALIDATED Recombinant RabMAB

★★★★☆ [3 Abreviews](#) [75 References](#) [7 Images](#)

Overview

Product name	Anti-TGF beta 1 antibody [EPR18163]
Description	Rabbit monoclonal [EPR18163] to TGF beta 1
Host species	Rabbit
Specificity	This antibody recognizes the mature and cleaved forms of TGF-beta 1.
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: L-929, RAW 264.7, HeLa, Wild-type A549, A549, SH-SY5Y and K562 whole cell lysates; Mouse serum; Mouse spleen lysate; Rat kidney and spleen lysates; Rat serum; Human kidney and spleen lysates; Recombinant protein fragment human TGF beta 1.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18163

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab179695 in the following tested applications.

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

Application	Abreviews	Notes
WB	★★★★☆ (3)	1/1000. Detects a band of approximately 50, 12.5 kDa (predicted molecular weight: 44 kDa).

Target

Function

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.

Tissue specificity

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.

Involvement in disease

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.

Sequence similarities

Belongs to the TGF-beta family.

Post-translational modifications

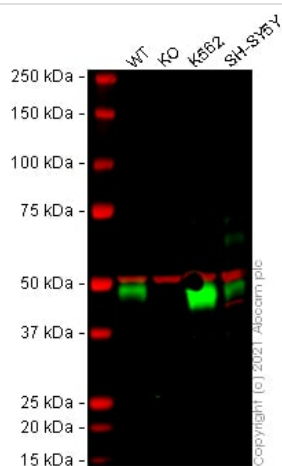
Glycosylated.

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

Cellular localization

Secreted > extracellular space > extracellular matrix.

Images



Western blot - Anti-TGF beta 1 antibody
[EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Wild-type A549 cell lysate

Lane 2 : TGFB1 knockout A549 cell lysate

Lane 3 : K562 cell lysate

Lane 4 : SH-SY5Y cell lysate

Lysates/proteins at 20 µg per lane.

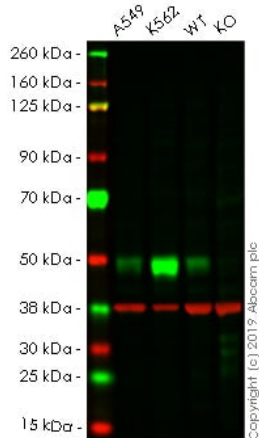
Performed under reducing conditions.

Predicted band size: 44 kDa

Observed band size: 48 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab179695 observed at 48 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

ab179695 was shown to react with TGF beta in wild-type A549 cells in Western blot with loss of signal observed in TGFB1 knockout cell line **ab269509** (TGFB1 knockout cell lysate **ab269671**). Wild-type A549 and TGFB1 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab179695 and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : A549 cell lysate

Lane 2 : K562 cell lysate

Lane 3 : Wild-type HeLa cell lysate

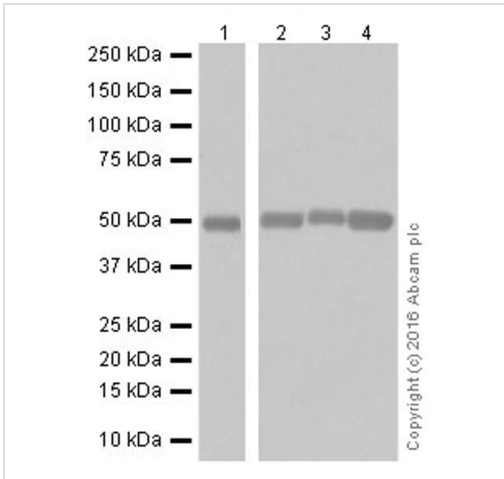
Lane 4 : TGF beta 1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 44 kDa

Lanes 1 -4: Merged signal (red and green). Green - ab179695 observed at 50 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab179695 was shown to react with TGF beta 1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab255439** (knockout cell lysate **ab263799**) was used. Wild-type and TGF beta 1 knockout samples were subjected to SDS-PAGE. ab179695 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/5000 dilution

Lane 1 : L-929 (Mouse connective tissue fibroblast cell line) whole cell lysate

Lane 2 : RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

Lane 3 : A549 (Human lung carcinoma cell line) whole cell lysate

Lane 4 : K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

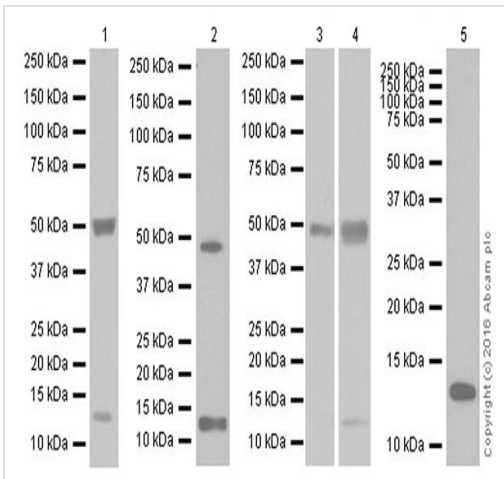
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 44 kDa

Observed band size: 50 kDa

Blocking/Dilution buffer: 5% NFD/MTBST.

Exposure time: Lane 1: 3 minutes; Lane 2-4:30 seconds.



Western blot - Anti-TGF beta 1 antibody [EPR18163] (ab179695)

Lane 1 : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/5000 dilution

Lanes 2-5 : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Mouse serum

Lane 2 : Mouse spleen lysate

Lane 3 : Rat kidney lysate

Lane 4 : Rat spleen lysate

Lane 5 : Rat serum

Lysates/proteins at 10 µg per lane.

Secondary

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

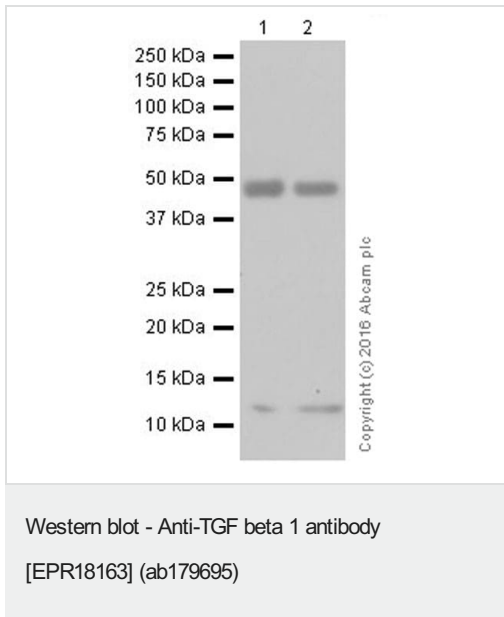
Predicted band size: 44 kDa

Observed band size: 12.5,50 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: Lane 1/2/3/5: 3minutes; Lane 4: 30 seconds.

The expression profile observed is consistent with what has been described in the literature (PMID:18390240; PMID:12717387; PMID:2139036).



All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Human kidney lysate

Lane 2 : Human spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/100000 dilution

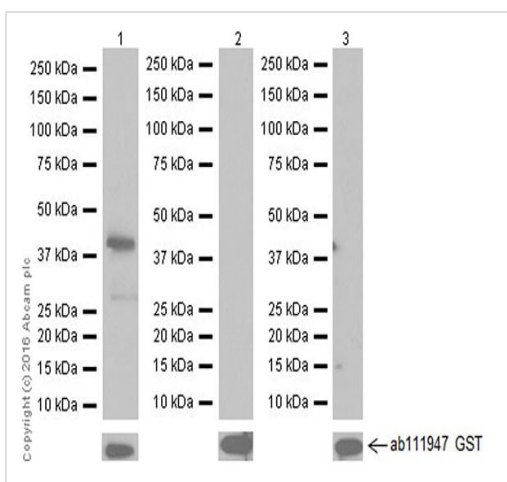
Predicted band size: 44 kDa

Observed band size: 12.5,50 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.

The expression profile observed is consistent with what has been described in the literature (PMID:18390240; PMID:12717387; PMID:2139036).



Western blot - Anti-TGF beta 1 antibody
[EPR18163] (ab179695)

All lanes : Anti-TGF beta 1 antibody [EPR18163] (ab179695) at 1/1000 dilution

Lane 1 : Recombinant protein fragment human TGF beta 1

Lane 2 : Recombinant protein fragment human TGF beta 2

Lane 3 : Recombinant protein fragment human TGF beta 3

Lysates/proteins at 0.01 µg per lane.

Secondary

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

Predicted band size: 44 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: Lane 1: 1 second; Lane 2/3: 3 minutes.

Recombinant protein fragment human TGF beta 1 contains aa279-390 with a GST-tag. Recombinant protein fragment human TGF beta 2 contains aa303-414 with a GST-tag Recombinant protein fragment human TGF beta 3 contains aa301-412 with a GST-tag. These three fragment recombinant proteins were made in-house.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-TGF beta 1 antibody [EPR18163] (ab179695)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors