abcam

Product datasheet

Anti-TGF beta 1 antibody [EPR18163] - BSA and Azide free ab233730

KO VALIDATED Recombinant RabMAb

3 Images

Overview

Product name	Anti-TGF beta 1 antibody [EPR18163] - BSA and Azide free
Description	Rabbit monoclonal [EPR18163] to TGF beta 1 - BSA and Azide free
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: A549, HeLa Wild-type A549, SH-SY5Y and K562 cell lysates.
General notes	ab233730 is the carrier-free version of **ab179695**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18163
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab233730 in the following tested applications.

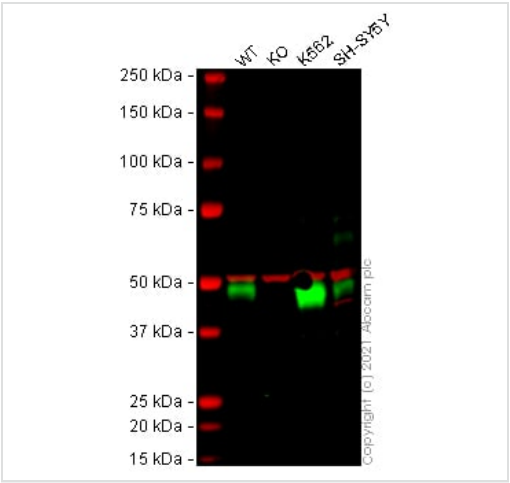
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. 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] - BSA and Azide free (ab233730)

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.

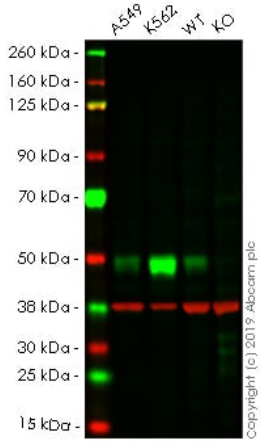
Performed under reducing conditions.

Predicted band size: 44 kDa
Observed band size: 48 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab179695**).

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] - BSA and Azide free (ab233730)

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.

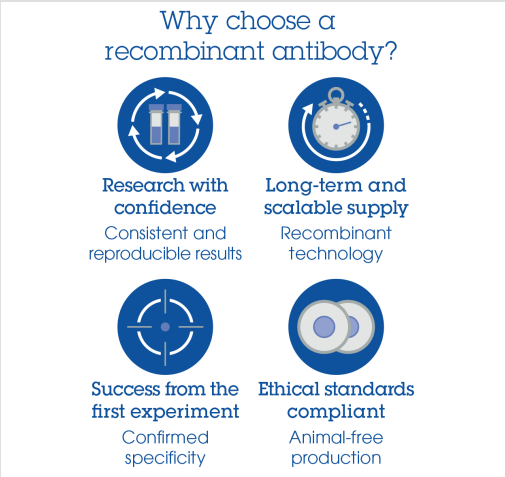
Performed under reducing conditions.

Predicted band size: 44 kDa
Observed band size: 50 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab179695**).

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.



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

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