

## Datasheet for 600-401-432

**TGF beta 1 Antibody****Overview**

<b>Description:</b>	Anti-TGF beta 1 (RABBIT) Antibody - 600-401-432
<b>Item No.:</b>	600-401-432
<b>Size:</b>	100 µg
<b>Applications:</b>	ELISA, WB, IHC
<b>Reactivity:</b>	Human
<b>Host Species:</b>	Rabbit

**Product Details**

<b>Background:</b>	TGF-beta-1 is a multifunctional cytokine that belongs to a superfamily of structurally related regulatory proteins, including three mammalian TGF-beta isoforms (TGF-beta-1, -beta-2, and -beta-3), activin/inhibins and bone morphogenetic proteins. The most abundant isoform, TGF-beta-1, is a 25kDa homodimer composed of two 12.5 kDa subunits joined by disulfide bonds. TGF-beta-1 is a highly conserved molecule; the amino acid sequence between human and mouse differs by only one residue. Although originally defined by its ability to cause anchorage independent cell growth and changes in cell morphology of rat fibroblasts, subsequent research has revealed that TGF-beta is actually a major growth inhibitor for most cell types. It is produced by a wide variety of cell and tissue types during all stages of cell differentiation. TGF-beta-1 sources include platelets, bone and soft tissues, such as placenta and kidneys.
<b>Synonyms:</b>	rabbit anti-TGFB1 antibody, rabbit anti-TGF beta 1 antibody, rabbit anti-TGF β 1 antibody, Transforming growth factor beta-1, Latency-associated peptide, LAP, TGFB 1
<b>Host Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>Format:</b>	IgG

**Target Details**

<b>Gene Name:</b>	TGFB1
<b>Reactivity:</b>	Human
<b>Immunogen Type:</b>	Conjugated Peptide

<b>Immunogen:</b>	TGF beta 1 Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the amino terminus of the mature growth factor (112 amino acids in length).
<b>Purity/Specificity:</b>	Rabbit Anti-TGF beta 1 affinity purified antibody is directed against human TGFb1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest reactivity with this protein from most mammalian sources based on 100% homology for the immunogen sequence. Cross-reactivity is expected with TGFb1 from non-mammalian sources as only a single amino acid residue change is found within the immunogen sequence from many other organisms.
<b>Relevant Links:</b>	<ul style="list-style-type: none"><li>• <a href="#">UniProtKB - P01137</a></li><li>• <a href="#">NCBI - 339558</a></li><li>• <a href="#">GeneID - 7040</a></li></ul>

## Application Details

<b>Tested Applications:</b>	ELISA, WB
<b>Suggested Applications:</b>	IHC (Based on references)
<b>Application Note:</b>	Anti-TGF beta 1 Antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 12.5 kDa in size corresponding to reduced mature TGFb1 by western blotting in the appropriate cell lysate or extract.
<b>Assay Dilutions:</b>	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
<b>ELISA:</b>	1:10,000 - 1:20,000
<b>IF:</b>	User Optimized
<b>WB:</b>	1:100 - 1:500

## Formulation

<b>Physical State:</b>	Liquid (sterile filtered)
<b>Concentration:</b>	1.19 mg/ml by UV absorbance at 280 nm
<b>Buffer:</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Preservative:</b>	0.01% (w/v) Sodium Azide
<b>Stabilizer:</b>	None

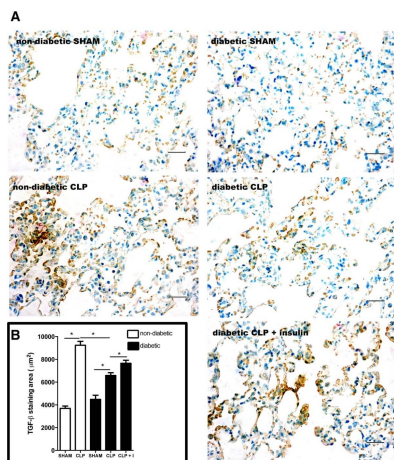
## Shipping & Handling

**Shipping Condition:** Dry Ice

**Storage Condition:** Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Expiration:** Expiration date is one (1) year from date of receipt.

## Images

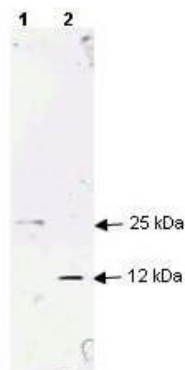


### Immunohistochemistry

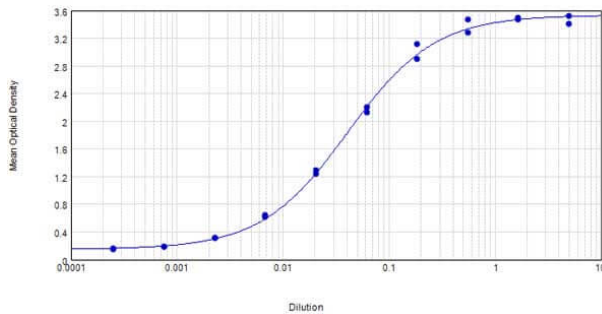
Expression of TGF- $\beta$  in the lung parenchyma after CLP. Non-diabetic, diabetic and insulin-treated diabetic rats were subjected to CLP or SHAM (false operated) surgery. After 6 hours, the lungs were washed, removed and processed. The expression of TGF- $\beta$  was assessed by immunohistochemistry, positive staining in brown (diffused) and nuclei in blue (A) and morphometric analysis (B) of stained area in  $\mu\text{m}^2$  at 400x magnification. Ten random non-coincident microscopic fields were evaluated for each group,  $n = 7/\text{group}$ . Scale bar = 20  $\mu\text{m}$ . Data are presented as mean + -SEM. \* $p < 0.01$ . Figure provided by CiteAb. Source: BMC Pulm Med, PMID: 25398720.

### Western Blot

Western blot analysis using Rockland's Affinity Purified anti-TGF beta 1 antibody to detect human TGF beta 1. Each lane contains 250 ng of protein under non-reducing (lane 1) and reducing conditions (lane 2). Comparison to molecular weight markers (not shown) was used to estimate the indicated molecular weights. The blot was incubated with a 1:200 dilution of the antibody at room temperature for 1 h followed by detection using IRDye<sup>®</sup> 800 labeled Goat-a-Rabbit IgG (H&L) (611-132-122) diluted 1:2,500. IRDye<sup>®</sup> 800 fluorescence image was captured using the Odyssey<sup>®</sup> Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

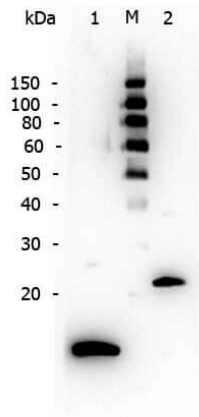


### Anti-TGF Beta 1 Sensitivity



### ELISA

ELISA results of purified Rabbit anti-TGF Beta 1 Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) (p/n 611-103-122) and TMB ELISA Peroxidase Substrate (p/n TMBE-1000).



### Western Blot

Western Blot of Rabbit anti-TGF Beta 1 antibody. Lane 1: Reduced recombinant TGF Beta 1. Lane 2: Ladder. Lane 3: Non-reduced recombinant TGF Beta 1. Load: 250 ng per lane. Primary antibody: TGF Beta 1 antibody at 1:200 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting (MB-070). Predicted/Observed size: 12 kDa/25 kDa, 12 kDa for reduced TGF Beta 1/25 kDa for non-reduced TGF Beta 1.

## References

- Figueiras LR et al. Sepsis-induced lung inflammation is modulated by insulin. *BMC Pulm Med.* (2014)

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.