

### Certificate of Analysis

**Product:** Affinity Purified Anti-TGF $\beta$ 1 [Rabbit]

**Code:** 600-401-432

**Lot #** 19509

**Size:** 100  $\mu$ g

**Physical State:** Liquid (sterile filtered)

**Antibody Concentration:** 0.46 mg/ml (by UV absorbance at 280 nm)

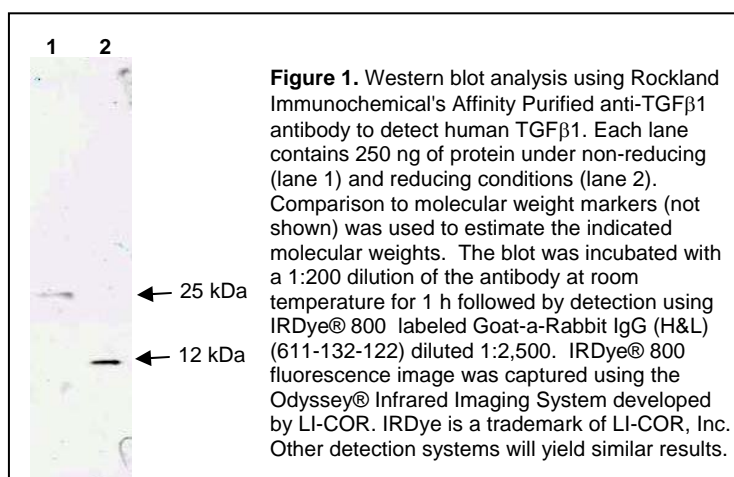
**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

**Background:** 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.



**Application Note(s):** This affinity purified 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 TGF $\beta$ 1 by western blotting in the appropriate cell lysate or extract.

<b>Recommended Dilutions:</b>	<b>ELISA</b>	1:1,000 - 1:5,000
	<b>WESTERN BLOT</b>	1:100 - 1:500
	<b>IF MICROSCOPY</b>	User Optimized
	<b>OTHER APPLICATIONS</b>	User Optimized

**Purity and Specificity:** This affinity purified antibody is directed against human TGF $\beta$ 1 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 TGF $\beta$ 1 from non-mammalian sources as only a single amino acid residue change is found within the immunogen sequence from many other organisms.

**Relevant Link(s):** Swiss Prot: [O95411](#) NCBI Link [WFHU2](#) (precursor) [AAA36735](#) (mature)

**Immunogen:** This affinity purified 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).

**General References:**

Urushizaki, Y., Niitsu, Y., Terui, T., Koshida, Y., Mahara, K., Kohgo, Y., Urushizaki, I., Takahashi, Y. and Ito, H. (1987) Cloning and expression of the gene for human transforming growth factor-beta in Escherichia coli. *Tumor Res.* **22**, 41-55.

Bourdrel, L., Lin, C.H., Lauren, S.L., Elmore, R.H., Sugarman, B.J., Hu, S. and Westcott, K.R. (1993) Recombinant human transforming growth factor-beta 1: expression by Chinese hamster ovary cells, isolation, and characterization. *Protein Expr. Purif.* **4** (2), 130-140.

**Related Products:**

[#611-703-127](#) Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10

[#611-132-122](#) IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10

[#MB-070](#) Blocking Buffer for Fluorescent Western Blotting

[#KIA-003](#) **MaxTag**<sup>™</sup> Anti-RABBIT IgG Kit for Immunoblotting

[#MB-070](#) Blocking Buffer for Fluorescent Western Blotting

**USDA Certification:** 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.

**Note:** 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.