

# LAP (T-17): sc-34830

## BACKGROUND

The transforming growth factor  $\beta$  (TGF $\beta$ ) superfamily is composed of numerous growth and differentiation factors, including TGF $\beta$ 1-3. TGF $\beta$ s are secreted from cells as latent complexes consisting of mature dimeric growth factor, the latency-associated propeptide (LAP) and a distinct gene product, latent TGF $\beta$  binding protein LTBP. Members of the TGF superfamily are involved in embryonic development and adult tissue homeostasis. The precursor of TGF $\beta$  is cleaved into mature TGF $\beta$  and LAP (latency associated peptide). Mature TGF $\beta$  remains associated with LAP by non-covalent interactions that block TGF $\beta$  from binding to its receptor.

## REFERENCES

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4. Hyytiainen, M., et al. 2004. Latent TGF $\beta$  binding proteins: extracellular matrix association and roles in TGF $\beta$  activation. *Crit. Rev. Clin. Lab. Sci.* 41: 233-264.
5. Annes, J.P., et al. 2004. Integrin  $\alpha$ V/ $\beta$ 6-mediated activation of latent TGF $\beta$  requires the latent TGF $\beta$  binding protein-1. *J. Cell Biol.* 165: 723-734.
6. Paliwal, S., et al. 2004. P311 binds to the latency associated protein and downregulates the expression of TGF $\beta$ 1 and TGF $\beta$ 2. *Biochem. Biophys. Res. Commun.* 315: 1104-1109.
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## CHROMOSOMAL LOCATION

Genetic locus: TGF $\beta$ 1 (human) mapping to 19q13.2; Tgfb1 (mouse) mapping to 7 A3.

## SOURCE

LAP (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TGF $\beta$ 1 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34830 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

LAP (T-17) is recommended for detection of the latency associated peptide of TGF $\beta$ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with mature TGF $\beta$ 1.

LAP (T-17) is also recommended for detection of the latency associated peptide of TGF $\beta$ 1 in additional species, including canine, bovine and porcine.

Molecular Weight of LAP: 44 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **LAP (J-17A): sc-80151**, our highly recommended monoclonal alternative to LAP (T-17).