

**Purified anti-mouse LAP (TGF- $\beta$ 1)**

**Catalog # / Size:** 1307010 / 100  $\mu$ g

**Clone:** TW7-16B4

**Isotype:** Mouse IgG1,  $\kappa$

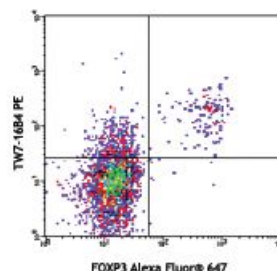
**Immunogen:** Mouse *Tgfb1*-transduced P3U1 cells

**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5



C57BL/6 mouse splenocytes were stimulated with anti-mouse CD3, CD28, and recombinant mouse IL-2 for 48-hours, then surface stained with CD4 FITC and LAP (TGF- $\beta$ 1) (clone TW7-16B4) PE (top) or mouse IgG1,  $\kappa$  PE isotype control (bottom). This was f

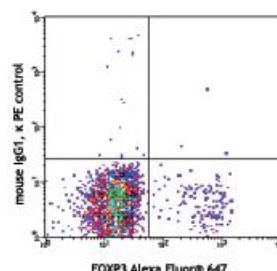
**Applications:**

**Applications:** Other

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is  $\leq 1.0$  microg per million cells in 100 microl volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** Clone TW7-16B4 has been reported to not cross-react with bovine LAP.<sup>2</sup> Several anti-LAP antibody clones have been compared and characterized for their LAP reactivity.<sup>2</sup> TW7-16B4 recognizes recombinant LAP, latent TGF- $\beta$ , and pro-TGF- $\beta$ .

Additional reported applications (for relevant formats) include: Western blotting<sup>1</sup> and immunoprecipitation<sup>1</sup>.



**Application References:** 1. Oida T, *et al.* 2010. *PLoS One* 5:e15523. (FC, IP, WB)  
2. Oida T, *et al.* 2011. *PLoS One* 6:e18365. (Neut)

**Description:** Transforming growth factor  $\beta$  (TGF- $\beta$ ) is a cytokine that has critical functions in the immune response by regulating Treg and Th17 cells. TGF- $\beta$  is first synthesized as pro-TGF- $\beta$  and then it is cleaved by furin proprotein convertase in the Golgi apparatus to produce the dimeric propeptides called latency-associated peptide (LAP) that non-covalently associates with the dimeric mature TGF- $\beta$  to prevent its activity. This complex can further associate with latent-TGF- $\beta$ -binding protein (LTBP) to produce a large latent form for deposition onto the extracellular matrix. The latent-TGF- $\beta$  can be expressed on the membrane of activated Treg cells, immature dendritic cells, megakaryocytes, and platelets.

**Antigen**  
**References:**

1. Oida T, *et al.* 2010. *PLoS One* 5:e15523.
2. Tran D, *et al.* 2009. *P. Natl. Acad. Sci. USA* 106:13445.
3. Ochi H, *et al.* 2006. *Nat. Med.* 12:627.
4. Oida T, *et al.* 2003.