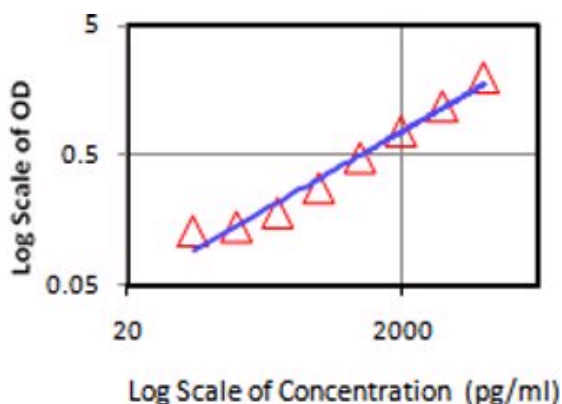


## Anti-Human TGF beta Purified

Catalog Number: 14-9943

Also Known As: TGF $\beta$ , transforming growth factor

RUO: For Research Use Only



Standard curve of Anti-Human TGF $\beta$  ELISA. Recombinant cytokine standard concentration in pg/ml.

### Product Information

Contents: Anti-Human TGF beta Purified


**REF** Catalog Number: 14-9943

Clone: eBioTB2F


Concentration: 0.5 mg/ml


Host/Isotype: Rat IgG2a,  $\kappa$

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

 Temperature Limitation: Store at 2-8°C.

**LOT** Batch Code: Refer to Vial

 Use By: Refer to Vial

 Caution, contains Azide

### Description

The eBioTB2F antibody reacts with Transforming Growth Factor-beta (TGF- $\beta$ ), a pleiotropic cytokine, exists in five isoforms, known as TGF- $\beta$ 1-5. Homologies between isoforms range from 70-80% but no homology exists to TGF- $\alpha$ . TGF- $\beta$ 1 is ubiquitous and the most abundant form found in lymphoid organs, while other isoforms are expressed in a more restricted distribution. The biologically active state of all isoforms are disulfide-linked homodimers. The heat- and acid- stable monomeric subunits have a length of 112 amino acids. The isoforms of TGF- $\beta$  arise by proteolytic cleavage of longer precursors; the isoforms are derived from the carboxyterminal ends of these precursors. Isoforms isolated from different species are evolutionarily closely conserved and have sequence identities on the order of 98%. Mature human, porcine, simian, chicken and bovine TGF- $\beta$ 1 are identical and differ from mouse TGF- $\beta$ 1 in a single amino acid. TGF- $\beta$ 1 is produced in very high levels by platelets. Other cellular sources of TGF- $\beta$ 1 include macrophages, lymphocytes, endothelial cells, chondrocytes, and leukemic cells. TGF- $\beta$ 1 secretion can be induced by steroids, retinoids, EGF, NGF, vitamin D3, and IL-1. Activities of TGF- $\beta$ 1 include inhibition of cell growth for inhibitor for normal and transformed epithelial cells, endothelial cells, fibroblasts, neurons, and lymphoid cells and other hematopoietic cell types. TGF- $\beta$ 1 inhibits the proliferation of T cells and NK cells and downregulates the activities of activated macrophages. TGF- $\beta$ 1 blocks the anti-tumor activity of IL-2 – bearing lymphokine-activated killer (LAK) cells.

Recently, TGF- $\beta$ 1 has been found to have a critical role in the development of regulatory T cells. Dendritic cells exposed to tumors have been reported to secrete TGF- $\beta$ 1 and stimulate expansion of natural T reg cells. Moreover, TGF- $\beta$ 1 has been shown to act as a costimulatory factor for expression of Foxp3, leading to the differentiation of CD4+CD25+ Treg cells from peripheral CD4+CD25- progeny. TGF- $\beta$ -induced regulatory T cells have been termed Ti-Treg.

### Applications Reported

This eBioTB2F antibody has been reported for use in ELISA.

### Applications Tested

The eBioTB2F antibody has been tested as the capture antibody in a sandwich ELISA for analysis of human and mouse TGF- $\beta$  in combination with the detection eBio16TFB (cat. 13-9923) antibody for detection and recombinant human TGF- $\beta$  (cat. 14-8348) as the standard. A suitable range of concentrations of this antibody for ELISA capture is 6-10  $\mu$ g/ml. A standard curve consisting of doubling dilutions of the recombinant standard over the range of 8000 pg/ml - 60 pg/ml should be included in each ELISA plate.

### References

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#### Related Products

13-9923 Anti-Human TGF beta Biotin (eBio16TFB)

14-8348 Human TGF beta 1 Recombinant Protein

88-7344 Human/Mouse TGF beta 1 ELISA Ready-SET-Go!®

88-7449 Human/ Mouse TGFb1 ELISA Ready-SET-Go! Kit (See replacement item BMS249/3)

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