



## Product Information

### TRANSFORMING GROWTH FACTOR- $\beta$ 2 (TGF- $\beta$ 2) From Porcine Platelets

Product Number T 5300

#### Product Description

Transforming Growth Factor- $\beta$  (TGF- $\beta$ ) is a multifunctional protein capable of influencing cell proliferation, differentiation, and a variety of cellular functions.<sup>1,2</sup> In general, TGF- $\beta$  stimulates growth of cells of mesenchymal origin, but inhibits growth of hepatocytes, T and B lymphocytes and epithelial cells. TGF- $\beta$  is known to interact with several agents including EGF, FGF, TGF- $\alpha$ , PDGF, and IL-2. TGF- $\beta$  is an important mediator of the formation of the extracellular matrix, generally with activities that stimulate the formation of the extracellular matrix and inhibit the degradation of the extracellular matrix.<sup>3</sup> TGF- $\beta$  is a potent inhibitor of the myogenesis of both skeletal and cardiac muscle cells *in vitro*.<sup>4</sup>

#### Reagents

Lyophilized from a 0.2  $\mu$ m-filtered solution in 25% acetonitrile, 0.1% trifluoroacetic acid containing 50  $\mu$ g BSA as a carrier protein.

#### Storage/Stability

Store at  $-20^{\circ}\text{C}$ .

For extended storage, freeze in working aliquots at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . Repeated freezing and thawing are not recommended.

#### Reconstitution

Reconstitute the contents of the vial using 0.2  $\mu$ m-filtered 4 mM HCl, containing 1 mg/ml of high purity BSA to make a TGF- $\beta$ 2 stock solution of 1  $\mu$ g/ml. Completely rinse the walls of the vial.

#### Product Profile

The biological activity of porcine TGF- $\beta$ 2 was tested in culture by measuring its ability to inhibit  $^3\text{H}$ -thymidine incorporation in the IL-4 dependent mouse T-helper cell line HT-2.<sup>5</sup> The  $\text{EC}_{50}$  is defined as the effective concentration of growth factor that elicits 50% inhibition of cell growth in a cell based bioassay.

#### References

1. Sporn, M. B., et al., Science, **233**, 532 (1986).
2. Roberts, A. B., et al., Adv. Cancer Res., **51**, 107 (1987).
3. Sporn, M. B., et al., J. Cell Biol., **105**, 1039 (1987).
4. Roberts, A. B., and Sporn, M. B., et al., Growth Factors, **8**, 1 (1993).
5. Tsang, M., et al., Lymphokine Res., **9**, 607 (1990).

JWM/DAA 11/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.