



TGF β (hTGF- β): sc-73337

BACKGROUND

Transforming growth factor betas (TGF β s) were originally discovered due to their ability to promote anchorage-independent growth of rat NRK fibroblasts in the presence of TGF α . It is now realized that TGF β s mediate many cell-cell interactions that occur during embryonic development. Three TGF β s have been identified in mammals. TGF β 1, TGF β 2 and TGF β 3 are each synthesized as precursor proteins that are very similar in that each is cleaved to yield a 112 amino acid polypeptide that remains associated with the latent portion of the molecules. Biologically active TGF β requires dimerization of the monomers (usually homodimers) and release of the latent peptide portion. Overall, the mature region of the TGF β 3 protein has approximately 80% identity to the mature region of both TGF β 1 and TGF β 2. However, the NH₂ terminals or precursor regions of their molecules share only 27% sequence identity.

REFERENCES

1. Todaro, G.J., Fryling, C. and De Larco, J.E. 1980. Transforming growth factors produced by certain human tumor cells: polypeptides that interact with epidermal growth factor receptors. *Proc. Natl. Acad. Sci. USA* 77: 5258-5262.
2. Anzano, M.A., Roberts, A.B., Smith, J.M., Sporn, M.B. and De Larco, J.E. 1983. Sarcoma growth factor from conditioned medium of virally transformed cells is composed of both type α and type β transforming growth factors. *Proc. Natl. Acad. Sci. USA* 80: 6264-6268.
3. Derynck, R., Jarrett, J.A., Chen, E.Y., Eaton, D.H., Bell, J.R., Assoian, R.K., Roberts, A.B., Sporn, M.B. and Goeddel, D.V. 1985. Human transforming growth factor β complementary DNA sequence and expression in normal and transformed cells. *Nature* 316: 701-705.
4. de Martin, R., Haendler, B., Hofer-Warbinek, R., Gaugitsch, H., Wrann, M., Schlusener, H., Seifert, J.M., Bodmer, S., Fontana, A. and Hofer, E. 1987. Complementary DNA for human glioblastoma-derived T cell suppressor factor, a novel member of the transforming growth factor β gene family. *EMBO J.* 6: 3673-3677.
5. ten Dijke, P., Hansen, P., Iwata, K.K., Pieler, C. and Foulkes, J.G. 1988. Identification of another member of the transforming growth factor type β gene family. *Proc. Natl. Acad. Sci. USA* 85: 4715-4719.
6. Wakefield, L.M., Smith, D.M., Broz, S., Jackson, M., Levinson, A.D. and Sporn, M.B. 1989. Recombinant TGF β 1 is synthesized as a two component latent complex that shares some structural features with the native latent TGF β complex. *Growth Factors* 1: 203-218.
7. ten Dijke, P., Thorikay, M., Stewart, A. and Iwata, K.K. 1990. Recombinant expression and purification of transforming growth factor β 3, a potent growth regulator. *Ann. N.Y. Acad. Sci.* 593: 36-42.
8. Miller, D.A., Pelton, R.W., Derynck, R. and Moses, H.L. 1990. Transforming growth factor β : a family of growth regulatory peptides. *Ann. N.Y. Acad. Sci.* 593: 208-217.

STORAGE

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

SOURCE

TGF β (hTGF- β) is a mouse monoclonal antibody raised against recombinant TGF β of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TGF β (hTGF- β) is recommended for detection of TGF β of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of TGF β : 25 kDa.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.