



TGFβ1 (9016.2): sc-57443

BACKGROUND

Transforming growth factor betas (TGFβs) were originally discovered due to their ability to promote anchorage-independent growth of rat NRK fibroblasts in the presence of TGFα. It is now realized that TGFβs mediate many cell-cell interactions that occur during embryonic development. Three TGFβs have been identified in mammals. TGFβ1, TGFβ2 and TGFβ3 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 TGFβ requires dimerization of the monomers (usually homodimers) and release of the latent peptide portion. Overall, the mature region of the TGFβ3 protein has approximately 80% identity to the mature region of both TGFβ1 and TGFβ2. However, the NH2 terminals or precursor regions of their molecules share only 27% sequence identity.

REFERENCES

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3. Derynck, R., et al. 1985. Human TGFβ cDNA sequence and expression in tumor cell lines. *Nature* 316: 701-705.
4. deMartin, R., et al. 1987. Complementary DNA for human glioblastoma-derived factor-β family. *EMBO J.* 6: 3673-3677.
5. ten Dijke, P., et al. 1988. Identification of a new member of the transforming growth factor type β gene family. *Proc. Natl. Acad. Sci. USA* 85: 4715-4719.
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7. ten Dijke, P., et al. 1990. Recombinant expression and purification of TGFβ3, a potent growth regulator. *Ann. N.Y. Acad. Sci.* 593: 36-42.
8. Miller, D.A., et al. 1990. TGFβ: a family of growth regulatory peptides. *Ann. N.Y. Acad. Sci.* 593: 208-217.

CHROMOSOMAL LOCATION

Genetic locus: TGFβ1 (human) mapping to 19q13.1; Tgfb1 (mouse) mapping to 7 A3.

SOURCE

TGFβ1 (9016.2) is a mouse monoclonal antibody raised against full length TGFβ1 of human origin.

PRODUCT

Each vial contains 100 μg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

TGFβ1 (9016.2) is recommended for detection of TGFβ1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TGFβ1.2, TGFβ2, TGFβ3, and TGFβ5.

Suitable for use as control antibody for TGFβ1 siRNA (h): sc-37191.

Molecular Weight of TGFβ1 monomer: 12.5 kDa.

Molecular Weight of TGFβ1 dimer: 25 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or T-47D cell lysate: sc-2293.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

STORAGE

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

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.