



Recombinant Human TGF- β 3 (Transforming Growth Factor- β 3)

Human recombinant protein expressed in *Nicotiana benthamiana*.

Cat. No. RF004-1

RF004-2.5

RF004-5

Molecular formula:

$C_{600}H_{902}N_{166}O_{174}S_{10}$

Molecular weight:

recombinant human TGF- β 3 is a 27.2 kDa protein composed of two identical 118 amino acid polypeptide chains linked by a single disulfide bond

p.I:

6,75

Extinction coefficient :

$E_{0.1\%} = 1,72$ (A 280 nm)

Purity assay:

> 97% by SDS-PAGE gel

Endotoxin level:

< 0.04 EU/ μ g protein (LAL method)

Animal-free product*

Sequence:

HHHHHHALDTNYCFRNLEENCCVRPLYIDFRQDLGWKVVHEPKGYANFCSGPCP
YLRSADTTHSTVLGLYNTLNPEASASPCCVPQDLEPLTILYYVGRTPKVEQLSNMNVV
KSCKCS

Description:

Recombinant human TGF- β 3 is a 27.2 kDa protein composed of two identical 118 amino acid

peptide chains linked by a single disulfide bond. Transforming growth factor- β is a family of five related cytokines that have been shown on a wide variety of normal and neoplastic cells, indicating the importance of these homo-dimer proteins as multi-functional regulators of cellular activity. The three mammalian isoforms of TGF- β (TGF- β 1, TGF- β 2 and TGF- β 3) signal through the same receptor and elicit similar biological responses. They are involved in physiological processes as embryogenesis, tissue remodelling and wound healing.

Formulation:

Lyophilized from a Tris HCl 0.05M buffer at pH 7,4

Source:

It is produced by transient expression of TGF- β 3 in non- transgenic plants. Recombinant human TGF- β 3 contains a 6-His-tag at the N-terminal end and is purified by sequential chromatography (FPLC). This product contains no animal-derived components or impurities

Reconstitution recommendation:

Lyophilized protein should be reconstituted in water to a concentration of 25 - 50 ng / μ l. Due to the protein nature, dimmers and multimers may be observed

Storage and Stability:

This lyophilized preparation is stable at 2-8° C. For long storage should be kept at -20° C and it is recommended to add a carrier protein (0.1% HSA or BSA). Repeated freezing and thawing is not recommended.

Purity and Serological Identification:

The protein was resolved by SDS polyacrylamide gel electrophoresis and the gel was stained with Coomassie blue.

Figure 1. SDS-PAGE analysis of recombinant TGF β 3. Samples were loaded in 15% SDS-polyacrylamide gel and stained with Coomassie blue. Lane MWM: Molecular weight marker (kDa); lane a: contains 0.2 μ g of recombinant TGF β 3.

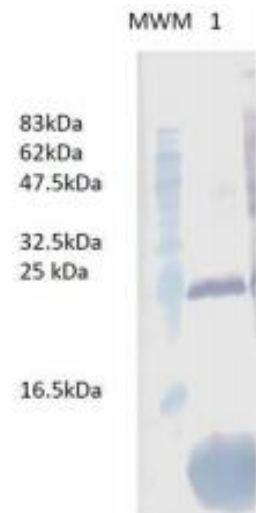


Recombinant Human TGF- β 3 Active

Serological Identification:

The protein was electrophoresed under reducing condition on a 15% SDS-polyacrylamide gel, transferred by electroblotting to a NC membrane and visualized by immune-detection with specific antibody TGF- β 3.

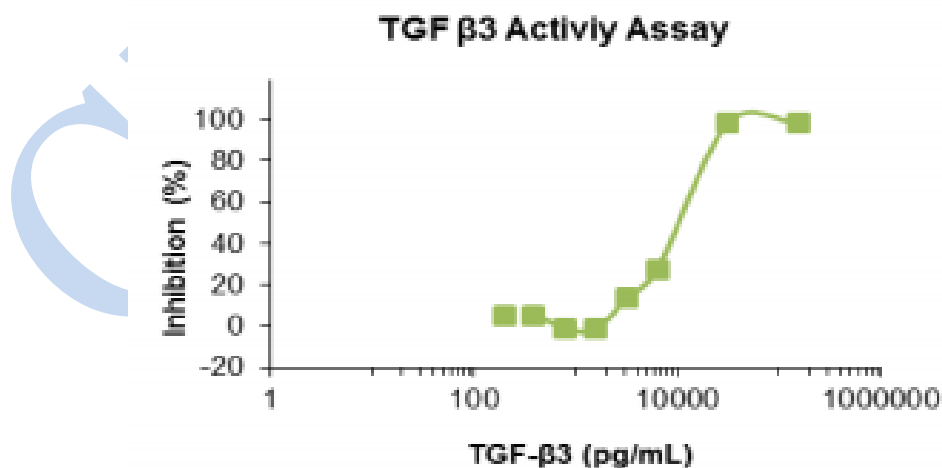
Figure 2. Western Blot analysis of recombinant TGF β 3. Lane MWM: Molecular weight marker (kDa), lane 1: 0.2 ug of TGF β 3.



Biological Activity:

The biological activity of TGF- β 3 is measured in culture by its ability to inhibit the mink lung epithelial (Mv1Lu) cells proliferation.

ED50 \leq 40ng/ml



References

-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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-Miller, D.A., et al. (1990). Transforming growth factor β : a family of growth regulatory peptides. *Ann. N.Y. Acad. Sci.*, 593: 208-217.

-Bocharov, E.C., et al. (2002). Dynamics-modulated biological activity of transforming growth factor beta3 *J. Biol. Chem.*, 277(48): 46273-46279.

-Zhongcheng, Z., Sun, P.D., (2006). An improved recombinant mammalian cell expression system for human transforming growth factor- β 2 and factor- β 3 preparations. *Protein Expr. Purif.*, 50: 9-17

We recommend for optimal usage follow instructions of batch Quality control sheet

For R+D purposes only. Purchaser must determine the suitability of the product(s) for their particular use.

***Agrenvec products are expressed in a plant system and intrinsically have extremely low endotoxin levels and are Animal-free.**