



Recombinant Human TGF- β 2 Active **(Transforming Growth Factor- β 2)**

Human recombinant protein expressed in
***Nicotiana benthamiana*.**

RF003

Molecular formula: C₆₀₂H₉₀₉N₁₆₇O₁₇₁S₁₀

Extinction coefficient: E^{0.1%} 2.02 (A₂₈₀ nm)

Molecular weight: recombinant human TGF- β 2 is a 27.08 kDa protein composed of two identical 118 amino acid polypeptide chains linked by a single disulfide bond.

p.I: 7.72

Purity: >97% as determined by SDS-PAGE gel.

Endotoxin level*: <0.04 EU/ μ g protein (LAL method).

Animal-free product*

Sequence:

HHHHHHALDAAYCFRNVQDNCCLRLPLYIDFKRDLGWKWIH
EPKGYNANFCAGACPYLWSSDTQHRSRLSLYNTINPEASAS
PCCVSQDLEPLTI LYYIGKTPKIEQLSNMIVKSCCKS

Description: Recombinant human TGF- β 2 is a 27.08 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.

Source: It is produced by transient expression of TGF- β 2 in non-transgenic plants. Recombinant human TGF- β 2 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.

Formulation: Lyophilized from a Tris HCl 0.05M buffer at pH 7.4

Reconstitution recommendation: Lyophilized protein should be reconstituted in water to a concentration of 50 ng / μ l. Due to the protein nature, dimers 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 Confirmation: The protein was resolved by SDS polyacrylamide gel electrophoresis and the gel was stained with Coomassie blue.

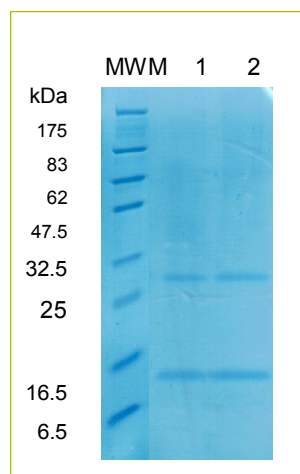


Figure 1. SDS-PAGE analysis of recombinant TGF- β 2. Samples were loaded in 15% SDS-polyacrylamide gel and stained with Coomassie blue. MWM: Molecular weight marker (kDa); lane 1-2 contain 0.3 μ g of recombinant TGF- β 2. (reducing condition, ~ 13kDa monomer and ~ 26kDa homodimers)

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



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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 2 (reducing conditions ~13kDa monomer and ~26kDa homodimers).

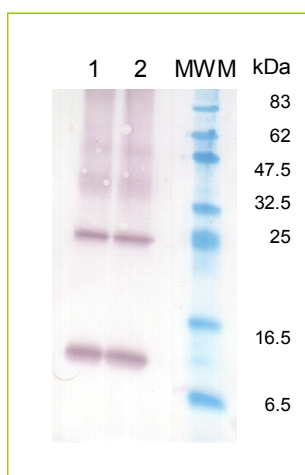
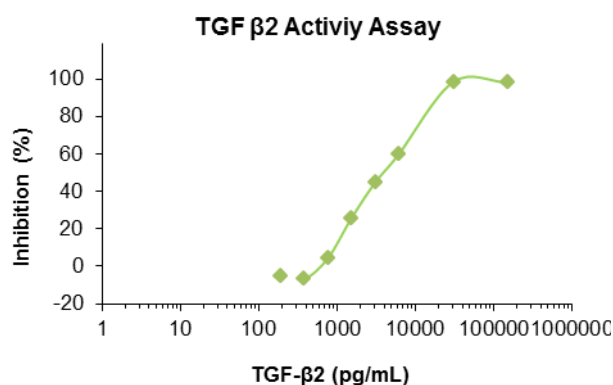


Figure 2. Western Blot analysis of recombinant TGF- β 2. Lane 1-2: 0.2 ug of TGF- β 2.; MWM: Molecular weight marker (kDa).

Biological Activity: The biological activity of TGF- β 2 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.
- Massague, J. (1990). The transforming growth factor-beta family. Ann. Rev. Cell Biol., 6: 597-641.
- Miller, D.A., et al. (1990). Transforming growth factor β : a family of growth regulatory peptides. Ann. N.Y. Acad. Sci., 593: 208-217.
- 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.

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

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