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Human Recombinant TGF-beta 2

Transforming growth factor beta 2

Catalog #78174	10 µg
Catalog #78174.1	50 µg

Product Description

Transforming growth factor (TGF) beta 2 is a member of the TGF-β superfamily and regulates diverse cellular phenotypes. Similar to TGF-β1 & -β3, TGF-β2 signals via serine-threonine kinase type I and II receptors and activates signal transduction via SMAD family proteins, regulating a variety of functions, such as cell proliferation, differentiation, wound healing, apoptosis, and metabolism (de Caestecker; Massague; Zuniga et al.). TGF-β2 is important in many developmental processes, for example, mice with TGF-β2 deletions show defects in the development of cardiac, lung, craniofacial, limb, eye, ear, and urogenital systems (Dunker & Kreiglstein).

Product Information

Alternative Names: BSC-1 cell growth inhibitor, Cetermin, Glioblastoma-derived T-cell suppressor factor, G-TSF, Polyergin, TGFB2

Accession Number: P61812

Amino Acid Sequence: ALDAAYCFRN VQDNCCLRPL YIDFKRDLGW KWIHEPKGYN ANFCAGACPY LWSSDTQHSR VLSLYNTINP EASASPCCVS QDLEPLTILY YIGKTPKIEQ LSNMIVKSCK CS

Predicted Molecular Mass: 12.7 kDa

Species: Human

Product Formulation: Lyophilized from a filtered solution containing hydrochloric acid.

Source: Human Cells

Purity: ≥ 95%

Specifications

Activity: The specific activity is ≥ 5.5 x 10^6 units/mg (EC50 ≤ 0.18 ng/mL) as determined by the ability to inhibit the IL-4-dependent proliferation of TF-1 human erythroleukemic cells.

Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Stability and Storage: Store at -80°C. Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 week or at -20 to -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data

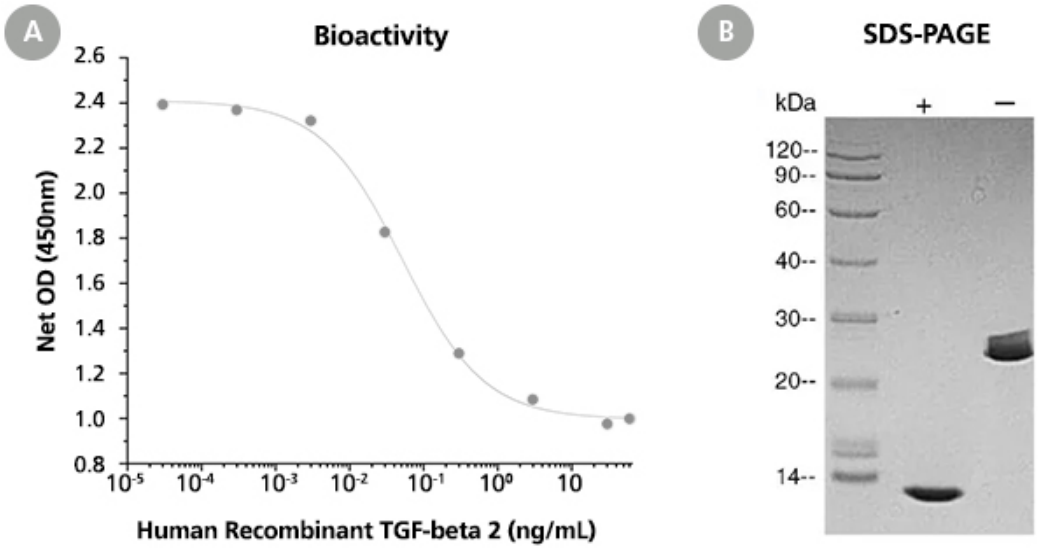

Figure 1. Biological Activity and Molecular Mass of Human Recombinant TGF-beta 2

(A) The biological activity of Human Recombinant TGF-beta 2 was tested by its ability to inhibit the IL-4-dependent proliferation of TF-1 human erythroleukemic cells. The EC50 is defined as the effective concentration of the growth factor at which inhibition is at 50% of maximum. The EC50 in the example above is less than 0.18 ng/mL.

(B) 5 µg of Human Recombinant TGF-beta 2 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant TGF-beta 2 has a predicted molecular mass of 12.7 kDa.

Related Products

For a complete list of cytokines or peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

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Dünker N & Krieglstein K. (2000) Targeted mutations of transforming growth factor-beta genes reveal important roles in mouse development and adult homeostasis. Eur J Biochem 267(24): 6982–8.
Massagué J. (2000) How cells read TGF-beta signals. Nat Rev Mol Cell Biol 1(3): 169–78.
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