Product Description
Transforming growth factor (TGF) beta 3 is a member of the TGF-β superfamily and regulates diverse cellular phenotypes. TGF-beta 3 binds to serine-threonine kinase type I and II receptors and activates signal transduction through SMAD2/3 proteins, thus regulating a variety of functions, including cell proliferation, differentiation, wound healing, apoptosis, and metabolism (Massagué; McDowell et al.). TGF-beta 3 enhances glycosaminoglycan production by mesenchymal stromal cells, stimulates scar-free healing, and improves glucose tolerance and phenotypic changes in adipocyte morphology (Hall et al.; Holton et al.). TGF-beta 3 induces proliferation of posterofrontal suture-derived mesenchymal stromal cells, and stimulates expression of fibroblast growth factors 2 and 18 (James et al.).

Product Information
Alternative Names: ARVD, FLJ16571, TGFB3, TGF-b3, Transforming growth factor beta-3
Accession Number: P10600
Amino Acid Sequence: MALDTNYCFR NLEENCCVRP LYIDFRQDLG WKWVHEPKGY YANFCGSCP8 YLRSADTTHS TVLGLYNTLN PEAASPCVV PQDLEPLTL ILYYVGRTPKVE QLSNMVVKSC KCS
Predicted Molecular Mass: 12.9 kDa monomer; 25.7 kDa dimer
Species: Human
Cross Reactivity: Mouse, Rat, Pig, Cow, Dog
Formulation: Sterile-filtered liquid containing 10 mM acetic acid and 20% ethanol
Source: E. coli

Specifications
Activity: The specific activity is ≥ 1.0 x 10^6 units/mg (EC50 ≤ 1 ng/mL) as determined by the ability to inhibit IL-4-induced HT-2 cell proliferation.
Purity: ≥ 95%
Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/μg protein.

Preparation and Storage
Storage: Store at 2 - 8°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Do not vortex. Store at 2 - 8°C for up to 12 months from date of receipt. Do not freeze.
Data

(A) The biological activity of Human Recombinant TGF-beta 3 was tested by its ability to inhibit proliferation of HT-2 cells in the presence of IL-4. Inhibition of cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation inhibition is at 50% of maximum. The EC50 in the example above is 0.0445 ng/mL.

(B) 1 μg of Human Recombinant TGF-beta 3 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant TGF-beta 3 has a predicted molecular mass of 12.9 kDa (monomer) or 25.7 kDa (dimer).

Related Products

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

References


