

Technical Data Sheet

Recombinant human TGF- β 2 protein



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Lot Specific Information

Lot Number: Lot Specific*

Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Website Link: <https://bioxcell.com/recombinant-human-tgf-beta-2-protein-rp020>

Product Information

Catalog Number:	RP020
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Recommended Dilution Buffer:	InVivoPure Reconstitution Buffer A
Formulation:	Lyophilized, white powder
Endotoxin:	≤ 0.5 EU/mg, LAL assay
Purity:	$\geq 95\%$; SDS-PAGE
Reconstitution:	Resuspend in 10 mM HCl (Reconstitution solution A) at >50 μ g/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 $^{\circ}$ C to -80 $^{\circ}$ C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	25.4 kDa (dimer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human TGF- β 2 protein (transforming growth factor beta 2) is a 25.4 kDa disulfide-linked homodimer of two identical 112-amino-acid chains and a member of the TGF- β superfamily alongside TGF- β 1 and TGF- β 3. Released from a latent complex by thrombospondin-1, plasmin, matrix metalloproteases or integrins, TGF- β 2 signals through the accessory receptor betaglycan (TGF- β RIII), the type II receptor TGF- β RII and either ALK-5 or ALK-1 to activate Smad and Smad-independent pathways. TGF- β 2 regulates cell proliferation, differentiation, wound healing, apoptosis and metabolism, is essential to cardiac, lung, craniofacial, limb, eye, ear and urogenital development, and suppresses IL-2-dependent T-cell growth with roles in immunomodulation and the tumor microenvironment. In cell culture it guides stem cell fate toward chondrocytes and epithelial-like cells, drives cell migration and extracellular matrix production for wound-healing models, and is a key inducer of epithelial-mesenchymal transition (EMT), making recombinant TGF- β 2 a versatile reagent for developmental, immunology and tissue-repair research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: human. Species similarity: mouse - 97%, rat - 97%, bovine - 100%, porcine - 100%.

Storage

Store at the stock concentration at 4° C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Store lyophilized protein between -20 $^{\circ}$ C and -80 $^{\circ}$ C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC
<https://bioxcell.com>
+1-866-787-3444
customerservice@bioxcell.com

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