

PRODUCT INFORMATION

TGF- β 3 Receptor-Binding Domain (human, recombinant)

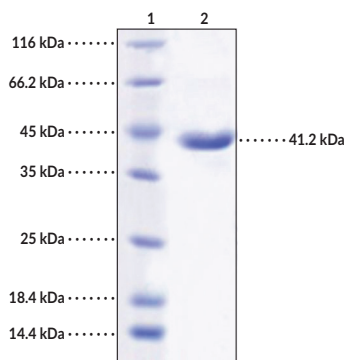
Item No. 42759

Overview and Properties

Synonym:	Transforming Growth Factor β 3
Source:	Recombinant N-terminal human IgG1 Fc-tagged TGF- β 3 receptor-binding domain expressed in HEK293 cells
Amino Acids:	301-412
Uniprot No.:	P10600
Molecular Weight:	41.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥ 1 year
Purity:	$\geq 90\%$ estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM HEPES pH 7.0, with 150 mM sodium chloride and 0.2% CHAPS
Endotoxin Testing:	<1.0 EU/ μ g, determined by the LAL endotoxin assay
Protein	
Concentration:	<i>batch specific</i> mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: TGF- β 3 Receptor-Binding Domain

SDS-PAGE Analysis of TGF- β 3 Receptor-Binding Domain. This protein has a calculated molecular weight of 41.2 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

TGF- β 3 is a multifunctional cytokine and member of the TGF- β superfamily.¹ TGF- β 3 is expressed as a proprotein that is cleaved in the Golgi to form TGF- β 3 latency-associated peptide (LAP) and mature TGF- β 3.² TGF- β 3 and TGF- β 3 LAP remain non-covalently bound until mature TGF- β 3 is released from latency by various proteins, including matrix metalloproteinases and plasmin.^{1,2} Secreted TGF- β 3 homodimers induce signaling through activin receptor-like kinase 5 (ALK5), also known as TGF- β receptor type 1 (TGF- β RI), and TGF- β receptor type 2 (TGFB2) and is involved in embryonic development, epidermal homeostasis, wound healing, bone formation, and involution of excess mammary gland epithelial cells during lactation.² It increases collagen levels in primary human foreskin fibroblasts.³ High levels of TGF- β 3 are associated with disease progression in patients with osteosarcoma.⁴ Cayman's TGF- β 3 Receptor-Binding Domain (human, recombinant) protein is a disulfide-linked homodimer. The reduced monomer, composed of TGF- β 3 (amino acids 301-412) fused to human IgG1 Fc at its N-terminus, consists of 373 amino acids and has a calculated molecular weight of 41.2 kDa.

References

1. Lavery, H.G., Wakefield, L.M., Occleston, N.L., *et al.* TGF- β 3 and cancer: A review. *Cytokine Growth Factor Rev.* **20**(4), 305-317 (2009).
2. Khalil, N. TGF- β : From latent to active. *Microbes Infect.* **1**(15), 1255-1263 (1999).
3. Murata, H., Zhou, L., Ochoa, S., *et al.* TGF- β 3 stimulates and regulates collagen synthesis through TGF- β 1-dependent and independent mechanisms. *J. Invest. Dermatol.* **108**(3), 258-262 (1997).
4. Kloen, P., Gebhardt, M.C., Perez-Atayde, A., *et al.* Expression of transforming growth factor- β (TGF- β) isoforms in osteosarcomas: TGF-beta3 is related to disease progression. *Cancer* **80**(12), 2230-2309 (1997).

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