Recombinant Human TGF-beta2

20191016BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**100-105S**
Size:	2 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	*7042*
Synonyms:	TGFB2; TGF-beta2

The three mammalian isoforms of TGF-β, TGF-β1, β2, β3, signal through the same receptor and elicit similar biological responses. They are multifunctional cytokines that regulate cell proliferation, growth, differentiation and motility as well as synthesis and deposition of the extracellular matrix. They are involved in various physiological processes including embryogenesis, tissue remodeling and wound healing. They are secreted predominantly as latent complexes which are stored at the cell surface and in the extracellular matrix. The release of biologically active TGF-β isoform from a latent complex involves proteolytic processing of the complex and /or induction of conformational changes by proteins such as thrombospondin-1. TGF-β2 has been shown to exert suppressive effects on IL-2 dependent T-cell growth, and may also have an autocrine function in enhancing tumor growth by suppressing immuno-surveillance of tumor development. Recombinant human TGF-β2 is a 25.0 kDa protein composed of two identical 112 amino acid polypeptide chains linked by a single disulfide bond.

Sequence

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ALDAAYCFRN VQDNCCLRPL YIDFKRDLGW KWIHEPKGYN
ANFCAGACPY LWSSDTQHSR VLSLYNTINP EASASPCCVS
QDLEPLTILY YIGKTPKIEQ LSNMIVKSCK CS
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Database References

Protein RefSeq:	NP_001129071
Uniprot ID:	P61812
mRNA RefSeq:	NM_001135599

Product Specifications

Expressed in	Insect cells
Purity	> 95% by SDS-PAGE & HPLC analyses
Structural Information	homodimer
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	Lyophilized (Sodium Citrate, pH 3.5)
Length (aa):	112
MW:	25 kDa

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 10 months at -20°C to -80°C.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex*. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by its ability to inhibit the mouse IL-4-dependent proliferation of mouse HT-2 cells. The ED_{50} was found to be ≤ 0.2 ng/ml (≥ 5 x 10^6 units/mg).