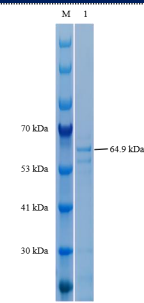


**Human Transforming Growth Factor beta 2 (TGFB2) Protein, Recombinant****I. For sale**

Product name	Catalog #	Size
Human Transforming Growth Factor beta 2 (TGFB2) Protein, Recombinant	P01T0004	10ug
		50ug
		100ug
		1mg

**II. Product Description**

Other Names	LDS4; G-TSF; TGF-beta2
Protein & NCBI Number	P61812, NM_001135599.4
Host	E.coli
Express Region	1-442aa
Protein Length	Total length of the protein (including Tag)
Protein Sequence	MHYCVLSAFLILHLVTVALSLSTCSTLDMDQFMRKRIEAIRGQI LSKCLKTSPPEYPEPEEVPPEVISIYNSTRDLLQEKASRRAAACERERSDEEYYAKE VYKIDMPPFFPSETVCPVVTTSPSGVSLCSRQSQVLCGYLDAIPPTFYRPFYFRIVRF DVSAMEKNASNLVKAEFRVFRQLQNPKARVPEQRIELYQILKSKDLTSPTQRYIDSKVV KTRAEGEWLSFDVTDVAHVEWLHHKDRNLGFKISLHCPCCCTFVPSNYYIIPNKSEEEA RFAGIDGTSTYTSGDQKTIKSTRKKNKSGKTPHLLLMLLPSYRLESQQTNRRKKRALDA AYCFRNVDNCCLRPLYIDFKRDLGWKWIHEPKGYNANFCAGACPYLWSSDTQHSRVL SLYNTINPEASAPCCVSQDLEPLTILYIGKTPKIEQLSNMIVKSKCS
Molecular Weight	about 50.6kDa
Fusion Tag	6xHis-SUMO (N-terminus)
Purity	≥95% SDS-PAGE
Physical Property	liquid or lyophilized powder
Reconstitution	Storage solution: We recommend using PBS or a suitable solvent according to the experimental requirements to prepare 1mg/mL storage solution, aliquot and store at -20 °C. Working solution: According to the experimental requirement, dilute Storage solution. The working solution can be stored at 4°C for 2-3 weeks after dilution.
Storage & Stability	The shelf life of liquid form is 6 months stored at -20 °C /-80 °C. The shelf life of lyophilized form is 12 months stored at -20 °C /-80 °C.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	



Bis-Tris (MOPS) SDS-PAGE

### III. Storage and Transportation

Product is stable for up to twelve months from date of receipt under sterile conditions at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$ . For optimal storage the lyophilized powder and protein stock solution should be aliquoted, and avoid freeze-thaw cycles.

### IV. Background

TGF $\beta$ 2 is a multifunctional polypeptide cytokine composed of 442 amino acids. It plays an important role in cell morphology, proliferation, differentiation, embryonic development and angiogenesis, and plays a very key role in the regulation of human immune system. The activated receptor complex signal is transmitted to cells mainly through Smad protein family. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate a latency-associated peptide (LAP) and a mature peptide, and is found in either a latent form composed of a mature peptide homodimer, a LAP homodimer, and a latent TGF-beta binding protein, or in an active form consisting solely of the mature peptide homodimer. The mature peptide may also form heterodimers with other TGF-beta family members. Disruption of the TGF-beta/SMAD pathway has been implicated in a variety of human cancers.

TGF $\beta$ 2 is also an important immunosuppressive factor. By inhibiting the activation and proliferation of T cells and B cells, TGF- $\beta$  2 can affect the activity of natural killer cells and reduce IL-2, IL-6, IL-10 and IFN- $\gamma$  And other cytokines.

### V. References

1. Massague J. TGF $\beta$  signalling in context. *Nat Rev Mol Cell Biol*, 2012, 13(10): 616-630.
2. Hau P, Jachimczak P, Schlaier J, et al. TGF- $\beta$ 2 signaling in high-grade gliomas. *Current Pharmaceutical Biotechnology*, 2011, 12(12):2150-2157.