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Product Datasheet

Human TGF beta 2 protein, His tag (active), Unconjugated GTX00211-PRO

Article Name	Human TGF beta 2 protein, His tag (active), Unconjugated
Biozol Catalog Number	GTX00211-PRO
Supplier Catalog Number	GTX00211-pro
Alternative Catalog Number	GTX00211-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	7042
UniProt	P61812
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Ser303~Glu414 (NP_001129071.1)

Application Notes

Transforming growth factor beta (TGF-beta) is a multifunctional cytokine belonging to the transforming growth factor superfamily. The TGF-beta superfamily includes endogenous growth inhibiting proteins, an increase in expression of TGF-beta often correlates with the malignancy of many cancers and a defect in the cellular growth inhibition response to TGF-beta. Its immunosuppressive functions then come to dominate, contributing to oncogenesis. To test the effect of TGF-beta on inhibit HGF-dependent proliferation, HepG2 cells were seeded into triplicate wells of 96-well plates at a density of 2000 cells/well and allowed to attach, replaced with serum-free overnight, then the medium was replaced with 2% serum standard DMEM including 1 ng/ml HGF prior to the addition of various concentrations of recombinant human TGF-beta. After incubated for 96h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μ l of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37C. The inhibitory effect of TGF-beta on HGF-dependent proliferation of HepG2 cells observed by inverted microscope. Cell viability was assessed by CCK-8 assay after incubation with recombinant TGF-beta for 96h. And TGF-beta significantly decreased cell viability of HepG2 cells. Transforming growth factor-beta 2 (TGFb2) is a secreted protein known as a cytokine that performs many cellular functions and has a vital role during embryonic development. It is an extracellular glycosylated protein. It is known to suppress the effects of interleukin dependent T-cell tumors. There are two named isoforms of this protein, created by alternative splicing of the same gene. Besides, Amyloid Precursor Protein (APP) has been identified as an interactor of TGFb2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human TGFb2 and recombinant human APP. Briefly, TGFb2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to APP-coated microtiter wells and incubated for 2h at 37C. Wells were washed with PBST and incubated for 1h with anti-TGFb2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37C. Finally, add 50 μ L stop solution to the wells and read at 450nm immediately. The binding activity of TGFb2 and APP was in a dose dependent manner.