

Rat CTGF protein, His and GST tag (active)

Cat. No. GTX03797-pro

Applications WB, Functional Assay

Species Rat

Package

10 µg

Applications

Application Note

Connective Tissue Growth Factor (CTGF), also known as CCN2 is a matricellular protein of the CCN family of extracellular matrix-associated heparin-binding proteins. CTGF has important roles in many biological processes, including cell adhesion, migration, proliferation, angiogenesis, skeletal development, and tissue wound repair, and is critically involved in fibrotic disease and several forms of cancers. Besides, Actin Beta (ACTb) has been identified as an interactor of CTGF, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat CTGF and recombinant rat ACTb. Briefly, CTGF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to ACTb-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CTGF 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 37°C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of CTGF and ACTb was in a dose dependent manner.

To measure the effect of CTGF on cell adhesion, a general procedure performance as follows: 100 µl PBS containing recombinant CTGF were incubated overnight at 4°C in 96-well ELISA plates. Wells were blocked with 200µl PBS containing 3% BSA and then incubated for 1h at 37 °C with 100 µl PBS containing approximately 5x10⁴ 3T3 cells. Adherent cells were then fixed for 15 min with 5% formaldehyde and non-adherent cells were removed by washing each well three times with PBS. The remaining cells were incubated with 0.5% crystal violet for 10mins then counted at high magnification (×400) randomly.

Observed MW (kDa) 68 kDa.

Properties

Form Lyophilized powder

Buffer Reconstitute with 10mM PBS pH7.4 to 0.1-1.0mg/ml. Do not vortex. Lyophilized from PBS pH7.4, containing 0.01% SKL, 5% Trehalose.

Preservative ProClin 300

Storage For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.

Region/Sequence N-terminal His-Tag; Gln25~Ala347 (NP_071602.1)

Expression System E. coli

Purity >92%

Endotoxin < 1 EU/µg

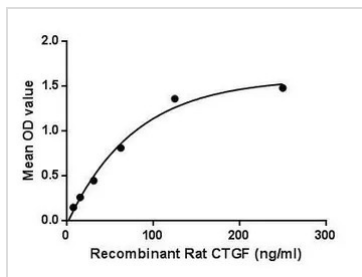
Note

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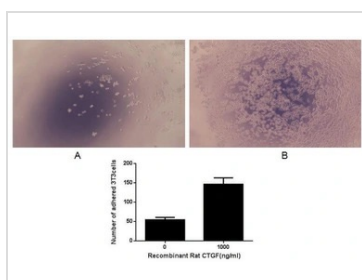
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DATA IMAGES

GTX03797-pro Functional Assay Image

Functional ELISA analysis of GTX03797-pro Rat CTGF protein (active) which can bind immobilized ACTb protein.

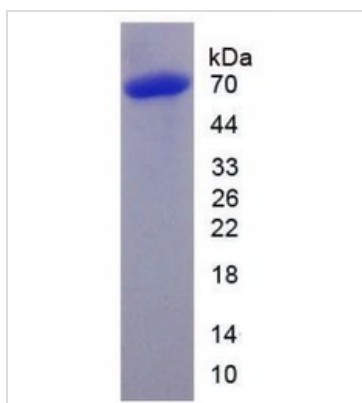

GTX03797-pro Functional Assay Image

Cell adhesion effect of GTX03797-pro Rat CTGF protein (active).

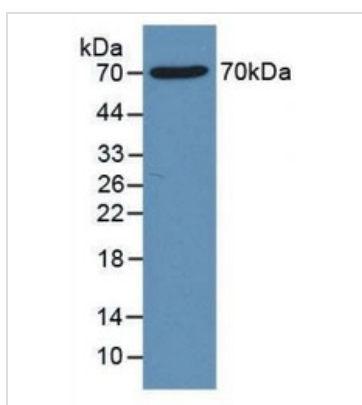
Upper: (A) 3T3 cells were seeded into the well without CTGF and incubated for 1hr at 37 °C.

(B) 3T3 cells were seeded into the well containing CTGF 1 µg/ml and incubated for 1hr at 37 °C.

Lower: The number of adhered 3T3 cells were incubated with 0.5% Crystal violet for 10mins then counted at high magnification (×400) randomly (five fields for each well).


GTX03797-pro Image

SDS-PAGE analysis of GTX03797-pro Rat CTGF protein, His and GST tag (active).


GTX03797-pro WB Image

WB analysis of GTX03797-pro Rat CTGF protein, His and GST tag (active).



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