

## CTGF Human

**Description:**CTGF Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 98 amino acids and having a molecular mass of 11.2 kDa. The CTGF is purified by proprietary chromatographic techniques.

**Synonyms:**CCN2, NOV2, HCS24, IGFBP8, MGC102839, CTGF, Connective Tissue Growth Factor.

**Source:**Escherichia Coli.

**Amino Acid Sequence:**MGKKCI RTPK ISKPIKFELS GCTSMKTYRA KFCGVCTDGR  
CCTPHRTTTL PVEFKCPDGE VMKKNMMFIK TCACHYNC PG DNDIFESLYY RKMYGDMA.

**Purity:**Purity of CTGF is greater than 95% as determined by SDS-PAGE.

**Formulation:**

CTGF was lyophilized from 1mg/ml solution containing 10mM NaAcetate buffer pH-6.

**Stability:**

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

Reconstitute at 0.1 mg/ml with 5mM NaAcetate, pH-6.

**Introduction:**

Partial identity with the N-terminal part of the Insulin-like Growth Factor Binding Proteins (IGFBPs). Module II includes a stretch of 70 amino acid residues which shares sequence identity with the Von Willebrand Factor Type C repeat (VWC). Module III contains sequences sharing identity with the Thrombospondin type 1 repeat (TSP1) (WSXCSXXCG), which is thought to be implicated in the binding of sulfated glycoconjugates and to be important for cell adhesion. Module IV, also designated CT, is encoded by exon 5. It is the least conserved one of the four domains at the level of nucleotide sequence, but it appears to be critical for several of the biological functions attributed to the CCN proteins. Module IV resembles the CT domain of several extracellular protein including, Von Willebrand's factor and mucins. Sequence similarities to heparin-binding motifs are also found within this domain. Proteolysis of the secreted full-length CCN proteins that has been reported in the case of CCN2 and CCN3 might result in the production of CCN-derived peptides with high affinity for ligands that full-length CCN proteins bind only poorly.

Amino-truncated CCN2 isoforms were biologically active whereas no specific biological activity has been attributed to the truncated CCN3. Although the molecular processes underlying the production of these secreted isoforms is presently unknown, it is important to note that proteolysis occur at the same amino acid residues in both CCN2 and CCN3. An elevated expression of CCN2 has also been detected by Northern blotting in human invasive mammary ductal carcinomas, dermatofibromas, pyogenic granuloma, endothelial cells of angiolipomas and angioleiomyomas,

and in pancreatic tumors. A study performed with chondrosarcomas representative of various histological grades established that CCN2 expression was closely correlated with increasing levels

of malignancy. In agreement with CCN2 playing a role in brain tumor angiogenesis, immunocytochemistry studies indicated that both glioblastoma tumor cells and proliferating endothelial cells stained positive for CCN2. In astrocytomas, CCN2 expression was particularly elevated in high grade tumors, with a marked effect of CCN2 on cell proliferation. Downregulation of CCN2 expression in these cells was associated with a growth arrest at the G1/S transition while over-expression of CCN2 induced a two-fold increase of the number of cells in the G1 phase. Gene profiling analysis allowed to identify a set of about 50 genes whose expression might account for the proliferative activity of CCN2 in these cells. CCN2 was seen in a higher proportion of mononuclear cells of patients with acute lymphoblastic leukemia.

Catalog #: CYP5-548

For research use only.

**Biological Activity:**

Determined by the dose-dependent stimulation of the proliferation of HUVEC cells. The expected ED50 for this effect is 1-2

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