

## **Product** Data Sheet

## CCN2/CTGF Protein, Rhesus macaque (HEK293, His)

**Cat. No.:** HY-P78713

Synonyms: CCN2; NOV2; HCS24; IGFBP8; IBP-8; IGFBP-8; IGF-binding protein 8

Species: Rhesus Macaque

Source: HEK293

Accession: H9FQD5-1 (Q27-A349)

Gene ID: 714520 Molecular Weight: 39-45 kDa

## **PROPERTIES**

Biological Activity	Immobilized Rhesus macaque CTGF His at 1 $\mu$ g/mL (100 $\mu$ L/well) can bind Monoclonal Anti-Human CTGF Antibody Human IgG1 with a linear range of 0.1-2 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 μm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

## **DESCRIPTION**

Background

Cellular communication network factor 2 (CCN2) is a mitogen secreted by vascular endothelial cells and a cysteine-rich secreted matrix cell protein. CCN2 is involved in chondrocyte proliferation and differentiation, cell adhesion of multiple cell types, and in mesenchymal cells such as chondrocytes, osteoblasts, and fibroblasts under multiple types of mechanical stress, such as tensile stress, compressive stress, and highly expressed under shear stress). Furthermore, CCN2 expression is regulated by activation of various mechanosensory signaling pathways, such as mechanosensing ion channels, integrinfocal adhesion-actin dynamics, Rho GTPase family members, Hippo-YAP signaling, and G protein-coupled receptors. body. Certain polymorphisms in the CCN2 gene are associated with a higher incidence of systemic sclerosis. In the field of airway fibrotic asthma, CCN2 and fibronectin (FN) are classic epithelial-to-mesenchymal transition (EMT) and fibrosis markers. CCN2 and FN are upregulated in A549 cells in response to AREG stimulation. EGFR/JNK/AP-1 activation by AREG stimulation further mediates TGF-β-induced EMT in human lung epithelial cells. CCN2 is also associated with platelet-derived growth factor. Sunitinib (HY-10255A) induces autophagy through the TOLLIP (Toll-interacting protein)-mediated endosome-related pathway, leading to cardiomyocyte apoptosis and cardiac dysfunction. This maladaptive autophagy selectively degrades the cardiomyocyte survival mediator CCN2. Thus, sunitinib-induced cardiac dysfunction in vivo can be mimicked by the

ability of adeno-associated virus serotype 9 (AAV9) to specifically knock down Ccn2.

 ${\bf Caution: Product\ has\ not\ been\ fully\ validated\ for\ medical\ applications.\ For\ research\ use\ only.}$ 

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