

Name of Journal: *World Journal of Biological Chemistry*

ESPS Manuscript NO: 20242

Manuscript Type: Original Article

### Basic Study

CTGF differentially binds to <sup>12</sup>members of the cystine knot superfamily and potentiates PDGF-B signaling in rabbit corneal fibroblast cells

Liya Pi, Pei-Yu Chung, Srinivas Sriram, Masmudur M Rahman, Wen-Yuan Song, Edward W Scott, <sup>56</sup>Bryon E Petersen, Gregory S Schultz

### Abstract

**AIM:** To study the binding of connective tissue growth factor (CTGF) to cystine knot-containing ligands and how this impacts platelet-derived growth factor (PDGF)-B signaling.

**METHODS:** The binding strengths of CTGF to cystine knot-containing growth factors including vascular endothelial growth factor (VEGF)-A, PDGF-B, bone morphogenetic protein (BMP)-4, and transforming growth factor (TGF)- $\beta$ 1 were

## Match Overview

Rank	Source	Words	Similarity
1	CrossCheck	41 words	1%
	Erawan Borkham-Kamphorst. "CCN3/NOV small interfering RNA enhances fibrogenic gene expression in primary he...		
2	Internet	26 words	<1%
	crawled on 02-Aug-2015 journals.plos.org		
3	CrossCheck	21 words	<1%
	Yoshida, K. "Connective tissue growth factor binds to fibronectin through the type I repeat modules and enhances t...		
4	CrossCheck	20 words	<1%
	Daisuke Takamatsu. "Binding of the Streptococcus gordonii surface glycoproteins GspB and Hsa to specific carbohydr...		
5	Internet	19 words	<1%
	crawled on 06-Nov-2013 www.freshpatents.com		
6	CrossCheck	19 words	<1%
	"Type I IL-4Rs Selectively Activate IRS-2 to Induce Targeted Gene Expression in Macrophages", Science Signaling, 12/...		
7	Internet	19 words	<1%
	crawled on 31-Jan-2014 www.plosone.org		
	Internet	18 words	<1%



CTGF Differentially Binds to Members of the Cystine Knot Superfamily a



网页 图片 新闻 视频 更多 - 搜索工具

找到约 1,350 条结果 (用时 0.90 秒)

**[PDF] Corneal Wound Repair and Healing - ARVO**  
[www.arvo.org/webs/am2014/abstract/sessions/442.pdf](http://www.arvo.org/webs/am2014/abstract/sessions/442.pdf) - 翻译此页  
 2014年5月7日 - and consequently enhanced the ability of these cells to seal linear ...  
 insights into how EGFR signaling can be modulated during corneal epithelial repair. ....  
 CTGF had differential affinity to growth factors of the cysteine knot superfamily ...  
 interaction was 1.8 nM and Kd for CTGF and PDGF-B binding.

**CCN2/Connective Tissue Growth Factor Is Essential for ...**  
[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > ... > PubMed Central (PMC) - 翻译此页  
 作者: F Hall-Glenn - 2012 - 被引用次数: 46 - 相关文章  
 2012年2月20日 - CCN family members are cysteine-rich and contain an N-terminal  
 secretory ... Conversely, the loss of CCN2 in fibroblasts results in decreased ... CCN2  
 potentiates PDGF signaling in vascular cells ... CCN2 was originally identified as a  
 protein that competes with PDGF-B for binding to NIH 3T3 cells, ...

**Purification and Characterization of Novel Heparin-binding ...**  
[www.jbc.org/content/272/32/20275.full](http://www.jbc.org/content/272/32/20275.full) - 翻译此页  
 作者: DR Brigstock - 1997 - 被引用次数: 196 - 相关文章  
 1997年8月8日 - 10-kDa CTGF-mediated fibroblast DNA synthesis was modulated by ....  
 Two New Zealand White rabbits (rabbits A and B), which had been bled to ... Further, the  
 3T3 cell mitogenic activity of HBGF-0.8 was synergistically potentiated by .... "cystine  
 knot" motif that occurs in a structural superfamily of dimeric ...

**NOVH increases MMP3 expression and cell migration in ...**  
[www.fasebj.org/content/early/2003/10/.../fj.02-1023fje.full.pdf](http://www.fasebj.org/content/early/2003/10/.../fj.02-1023fje.full.pdf) - 翻译此页  
 作者: M Laurent - 2003 - 被引用次数: 45 - 相关文章  
 2003年8月15日 - glioblastoma cells via a PDGFR- $\alpha$ -dependent mechanism ... C  
 (VWC/CR) domain, a thrombospondin type I repeat (TSP-1), and a cystine knot (CT



Connective tissue growth factor differentially binds to members of the c



网页 图片 新闻 视频 更多 搜索工具

获得 8 条结果 (用时 0.54 秒)

### Dynamics of Transforming Growth Factor Beta Signaling in ...

www.ncbi.nlm.nih.gov > ... > PubMed Central (PMC) 翻译此页

作者: KW Finnsen - 2013 - 被引用次数: 28 - 相关文章

Among the many growth factors studied in the context of wound healing, transforming ... which are structurally characterized by the presence of a cysteine-knot motif, ... Members of the TGF- $\beta$  superfamily and their signaling components, ..... mostly TGF- $\beta$ 1 and TGF- $\beta$ 2 derived from degranulating platelets and immune cells.

### Purification and Characterization of Novel Heparin-binding ...

www.jbc.org/content/272/32/20275.long - 翻译此页

作者: DR Brigstock - 1997 - 被引用次数: 205 - 相关文章

1997年8月8日 - Uterine growth factors are potential effector molecules in embryo growth signaling pathways. ... product of porcine connective tissue growth factor (pCTGF). .... Two New Zealand White rabbits (rabbits A and B), which had been bled to .... "cystine knot" motif that occurs in a structural superfamily of dimeric ...

### CCN2/Connective Tissue Growth Factor Is Essential for ...

www.ncbi.nlm.nih.gov > ... > PubMed Central (PMC) 翻译此页

作者: F Hall-Glenn - 2012 - 被引用次数: 54 - 相关文章

2012年2月20日 - CCN2, also known as connective tissue growth factor, is a member of ... a cysteine knot similar to those present in many growth factors, including members of the TGF $\beta$  superfamily, platelet derived growth factor (PDGF), and nerve growth factor (NGF). .... CCN2 potentiates PDGF signaling in vascular cells.

### [PDF] The Connective Tissue Growth Factor/Cysteine ... - CiteS...

citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1... 翻译此页

作者: ... - 2005 - 被引用次数: ... - 相关文章



[网页](#) [图片](#) [新闻](#) [视频](#) [更多 ▾](#) [搜索工具](#)

找到约 2,190 条结果 (用时 0.72 秒)

### The Connective Tissue Growth Factor/Cysteine- Rich 61 ...

[press.endocrine.org/doi/full/10.1210/edrv.20.2.0360](https://press.endocrine.org/doi/full/10.1210/edrv.20.2.0360) ▾ [翻译此页](#)

作者: DR Brigstock - 1999 - 被引用次数: 636 - [相关文章](#)

Since CTGF, *cyr61*, and *nov* were the prototype **members** of this family, this article adopts ... The Modular Structure of **Connective Tissue Growth Factor/Cysteine Rich ...** transforming growth **factor- $\beta$**  (TGF- $\beta$ ), and **platelet-derived growth factor** (PDGF) (1)... 3) (10) and thus support the proposed role of module 4 in **binding cell ...**

### Introduction - PLoS ONE

[www.plosone.org/article/fetchObjectAttachment.jsessionid...?uri...](http://www.plosone.org/article/fetchObjectAttachment.jsessionid...?uri...) ▾

CCN2/**Connective Tissue Growth Factor** (CTGF) is a matricellular protein that regulates ... CCN2 induced PDGF-**B** expression in endothelial **cells**, and **potentiated ...** (CT) motif contains a **cysteine knot** similar to those present in many **growth factors**, including **members** of the TGF $\beta$  **superfamily**, **platelet derived growth factor ...**

### Purification and Characterization of Novel Heparin-binding ...

[www.jbc.org/content/272/32/20275.long](http://www.jbc.org/content/272/32/20275.long) - [翻译此页](#)

作者: DR Brigstock - 1997 - 被引用次数: 205 - [相关文章](#)

1997年8月8日 - These data reveal the identity of a novel **growth factor** in uterine fluids as a ... of human and porcine **connective tissue growth factor** (hCTGF, pCTGF). .... Two New Zealand White **rabbits** (**rabbits A and B**), which had been bled to ..... "**cystine knot**" motif that occurs in a structural **superfamily** of dimeric **growth ...**

### Human Genomics | Full text | Eyeing the Cyr61/CTGF/NOV ...

[www.humgenomics.com/content/9/1/24](http://www.humgenomics.com/content/9/1/24) ▾ [翻译此页](#)

6天前 - The CCN genes can be subdivided into **members** developmentally indispensable ... **cysteine-rich 61** (CYR61), **connective tissue growth factor** (CTGF), and