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**Manuscript Type:** ORIGINAL ARTICLE

### *Basic Study*

**Identification of integrin  $\beta 6$  gene promoter and analysis of its transcription regulation in colon cancer cell**

Wei Niu, Qi-Yu Bo, Jun Niu, Zheng-Chuan Niu, Cheng Peng, Xue-Qing Zou,  
Zhao-Yang Zhang

### **Abstract**

#### BACKGROUND

The integrin  $\beta 6$  gene, which expresses in epithelial cancer, plays a pivotal role

#### Match Overview

1	<b>Crossref</b> 30 words Mingyan Xu, Hao Yin, Yihuang Cai, Wenxia Huang, Qing Ji, Fan Liu, Songlin Shi, Xiaoling Deng. "Lysophosphatidic aci	1%
2	<b>Internet</b> 24 words crawled on 22-Sep-2017 <a href="http://preview-cellandbioscience.biomedcentral.com">preview-cellandbioscience.biomedcentral.com</a>	1%
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## Integrin expression in colon cancer cells is regulated by ...

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We have reported that high cell density in a 2-dimensional monolayer culture model selectively **upregulates  $\beta 6$  integrin subunit expression** in colon cancer cells in a protein kinase C (PKC)-dependent manner in preference to other  $\beta$  subunits. 12 Moreover, PKC activity has been shown to increase with cell confluence in colon cancer cells, and the rise in PKC activity is much greater for  $\alpha v\beta 6$ ...

Cited by: 61

Author: Jun Niu, Douglas J. Dorahy, Xinhua Gu, R...

Publish Year: 2002

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<https://www.sciencedirect.com/science/article/pii/S2590158319300208>

Given that **transcription of ITGB6** is almost certainly a mechanism determining **its availability** at the cell surface, understanding **its regulation** could **identify** potential therapeutic targets in diseases where  $\alpha v\beta 6$  is overexpressed.

Author: Amelia Meecham, John F Marshall    Publish Year: 2019

## $\beta 6$ integrin induces the expression of metalloproteinase-3 ...

<https://www.sciencedirect.com/science/article/pii/S0304383514004479>

This means that ETS1 recruitment to the putative MMP-3 and MMP-9 **promoters** enhances the **transcription** of these **genes**, and  $\beta 6$  **integrin** further augments the **transcriptional** activity. This is an evidence for ETS1 interaction with the **MMP-3 and MMP-9 promoters** in colon cancer cells. Unlike the **MMP-3 and MMP-9 promoters**,...

Cited by: 19

Author: Huijie Gao, Huijie Gao, Cheng Peng, Che...

Publish Year: 2014

## Identification and characterization of the promoter of ...

<https://www.sciencedirect.com/science/article/pii/S0014482719306718>

LOXL2 is also engaged to **transcription regulation**, cell signaling transduction and cell adhesion **regulation**. ... but there are still few reports on the **identification** of **LOXL2 gene promoter** and the regulatory mechanism of **LOXL2 gene** expression. ... And it has been reported that inhibition of Sp1 **transcription** factor suppresses colon cancer ...

Author: Xin Liu, Tong Liu, Lanyue Hu, Tinghui ...    Publish Year: 2020



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Author: Xin Liu, Tong Liu, Lanyue Hu, Tinghui ... Publish Year: 2020

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The integrin  $\beta 6$  (ITGB6) gene, which encodes the limiting subunit of the integrin  $\alpha v\beta 6$  heterodimer, plays an important role in wound healing and carcinogenesis. The mechanism underlying ITGB6 ... +

### The human alpha 2 integrin gene promoter. Identification ...

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