

Accepted Manuscript

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PII: S0378-1119(17)30789-8
DOI: doi:[10.1016/j.gene.2017.09.071](https://doi.org/10.1016/j.gene.2017.09.071)
Reference: GENE 42261

To appear in: *Gene*

Received date: 23 April 2017
Revised date: 1 September 2017
Accepted date: 26 September 2017



Please cite this article as: Li, Li, Deng, Jun, Huang, Shanshan, Wang, Yi, Zhu, Lingling, Cao, Yuan, Xiong, Jianping, MiR-93-5p promotes gastric cancer-cell progression via inactivation of the Hippo signaling pathway, *Gene* (2017), doi:[10.1016/j.gene.2017.09.071](https://doi.org/10.1016/j.gene.2017.09.071)

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MiR-93-5p promotes gastric cancer-cell progression via inactivation of the Hippo signaling pathway

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Abstract:

MiR-93-5p has been previously found to be associated with gastric cancer (GC) tumorigenesis; however, the current understanding of its function in this context remains largely incomplete. In the present study, we showed that miR-93-5p was upregulated in GC tissues. We also demonstrated that miR-93-5p overexpression promoted the proliferation, migration, invasion, and chemoresistance of SGC-7901 cells *in vitro*, and conversely, that endogenously silencing miR-93-5p expression induced the opposite effects in HGC-27 cells. Overexpression of miR-93-5p was found to inactivate the Hippo pathway, and furthermore, miR-93-5p knockdown activated Hippo signaling. MiR-93-5p upregulation was also shown to inhibit the expression of two well-characterized Hippo pathway regulators, protocadherin Fat 4 (FAT4), and large tumor suppressors 2 (LATS2), at both the mRNA and protein level. Additionally, the results of bioinformatics analyses and luciferase reporter assays indicated that miR-93-5p directly targets the 3'-UTR of FAT4 and LATS2. Taken together, these results demonstrate that miR-93-5p promotes GC-cell progression via the inactivation of the Hippo signaling pathway, and thus, represents a potential therapeutic target for the treatment of GC.

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