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Figure 1

(a) Inc-pri-miR-122

(northern) (northern) (northern)

pre-pri-miR-122

b)

Northern blot

Human liver

kb

mRNA levels relative to pA-(fold change)

GAPDH U6 snRNA spliced unspliced

poly(A) separation

Northern blot

Total human liver RNA

6.00

% input

6.00

spliced unspliced GAPDH

mRNA

pre-miR-122

INT1: unspliced EX1-EX2: spliced

INT1: unspliced EX1-EX2: spliced

m7G-Cap selection

m7G-Cap background

spliced unspliced GAPDH

mRNA

mRNA

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**Figure 2**

**a**

![Diagram of Inc-pri-miR-122](image)

**b**

**Mapping 3’ ends of pri-miR-122**

![Western blot](image)

**c**

**Nuclear-cytoplasmic distribution**

![Western blot](image)

**Western blot fractionation control**

![Western blot](image)

**d**

**RNA stability**

![Graph](image)
Figure 3

(a) Inc-pri-miR-122

RNA levels normalized to INT1 (relative to si Cntrl)

Chromatin RNA

RNA levels normalized to INT1 (relative to si Cntrl)

BrU-NRO

(b) GAPDH

RNA levels normalized to INT1 (relative to si Cntrl)

Chromatin RNA

RNA levels normalized to INT1 (relative to si Cntrl)

BrU-NRO

(c) Western blot

Western blot
Figure 4

(a) Poly (A) separation

RNA levels relative to poly (A)- (fold change)

- siCtrl pA-
- siCtrl pA+
- siDGCR8 pA-
- siDGCR8 pA+

(b) Chromatin RNA-seq profile of Inc-pri-miR-122
Figure 5

(a) Diagram of HIV-pri-miR-122 transcriptional regulation.

(b) Northern blot analysis of pri-miR-122 WT and Δ in Hela cells.

(c) Northern blot analysis of Huh7 and HepG2 cells with pri-miR-122 WT.

(d) Northern blot analysis of pri-miR-122 WT and Δ in Hela cells with γ-actin.

(e) Northern blot analysis of pri-miR-122 WT and Δ in Hela cells with γ-actin.

(f) Graph showing RNA levels relative to poly(A) separation.

(g) Northern blot analysis of pri-miR-122 WT and Δ in Hela cells with γ-actin.
Figure 6

Metagene analysis of lncRNA genes harbouring miRNA

Metagene analysis of protein coding genes harbouring miRNA

Western blot

Western blot
Figure 7

Detection of MIR17HG-GPC5 chimeric transcript

Chromatin RNA-seq

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<tr>
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<th>siCntrl (sense)</th>
<th>siCntrl (antisense)</th>
<th>siDrosha (sense)</th>
<th>siDrosha (antisense)</th>
<th>siDGCR8 (sense)</th>
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<td>OGFRL1</td>
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<td>364</td>
<td>345</td>
<td>2611</td>
<td>195</td>
<td>5484</td>
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</tbody>
</table>

mRNA levels

Western blot

GPC5

α: GPC5

Level 1

0.21

OGFRL1

α: Actin

Level 1

0.46
Figure 8

(a) MIR17HG

(b) MIRLET7BH

(c) CPA mediated termination

Protein coding gene

mRNA production

Spliced mRNA

pA

IncRNA

mRNA production

Non-polyadenylated unstable lncRNA

CPA mediated termination

Efficient termination (MIRLET7BH)

Loss of Microprocessor

Non-CPA Compliant

CPA Compliant

Read-through

Termination defect associated interference (MIR17HG)

Pre-miRNA

Microprocessor

RNA Pol II