

Supplementary Table S1: A list of fusion events involving *CLEC12A* in the PBMCs of CML patients.

Left Gene	Left break point	Right break point	Right gene
<i>CLEC12A</i>	12:9951356:+	7:770471:+	<i>DNAAF5</i>
<i>CLEC12A</i>	12:9982129:+	21:33567157:+	<i>SON</i>
<i>CLEC12A</i>	12:9982129:+	X:66020127:+	<i>MIR223HG</i>
<i>CLEC12A</i>	12:9982129:+	1:185305643:-	<i>IVNS1ABP</i>
<i>CLEC12A</i>	12:9982129:+	16:89647331:-	<i>CHMP1A</i>
<i>CLEC12A</i>	12:9982129:+	22:36305102:-	<i>MYH9</i>
<i>CLEC12A</i>	12:9982129:+	6:35869901:-	<i>SRPK1</i>
<i>CLEC12A</i>	12:9982129:+	1:1390865:-	<i>CCNL2</i>
<i>CTD</i>	14:38194142:-	12:9971577:+	<i>CLEC12A</i>

Supplementary Table S2: Cellular localization of interactors of *CLEC12A* and *CLEC12A-MIR223HG* identified with pull down/mass spectrometry (based on Uniprot).

Protein	Interactor	Localization
CALX	<i>CLEC12A-MIR223HG</i>	Endoplasmic reticulum membrane
XPO5	<i>CLEC12A</i>	Cytoplasm
RHG04	<i>CLEC12A-MIR223HG</i>	Cytoplasm
PSA5	<i>CLEC12A/CLEC12A-MIR223HG</i>	Cytoplasm
A2MG	<i>CLEC12A-MIR223HG</i>	Secreted
RCN2	<i>CLEC12A-MIR223HG</i>	Endoplasmic reticulum lumen
RASL3	<i>CLEC12A-MIR223HG</i>	Cytoplasm
LUC7L	<i>CLEC12A-MIR223HG</i>	Nucleus

Supplementary Table S3: A list of primers used in this study.

Primer name	Primer sequence
CLEC12A-MIR223HG-Fwd/ Primer A/ qPCR primer	GGCTGGGATTATCTCCTGAAG
CLEC12A-MIR223HG-Rev/ Primer B/ qPCR primer	TTAGGCAGATGGCTGGTTG
CLEC12A-Rev/ qPCR primer	TGTTATTTAAGTCAGGTGCGTTTC
MIR223HG-F	AATGAGGCATTTGCCATACC
MIR223HG -R	TGAAAAGAGGAAAAGATCTCCA
hB2M-F/ qPCR primer	TGCCGTGTGAACCATGTGAC
hB2M-R/ qPCR primer	CGGCATCTTCAAACCTCCAT
Primer C	AGTGCATATATTTATTGCAGCATCTGGATC
Primer D	TGAACTCCTCAGTGCATATATTTATTGCAGC
Primer E	GTCAGGCCTGTGAACTCCTCAG
Primer F	GAAAGGAGACCAAAAAGTCAGGCCTG
Primer G	GGCTCATTTGCAGACATATGGGTGATTGGTAC
Primer H	GAGAAGAAATGTACTATTCCCAACA
Primer I	TTGGGGTTTGGGAAATTAGC
SAM-CLEC12A	CACTCACTAATCTGCAGCTG

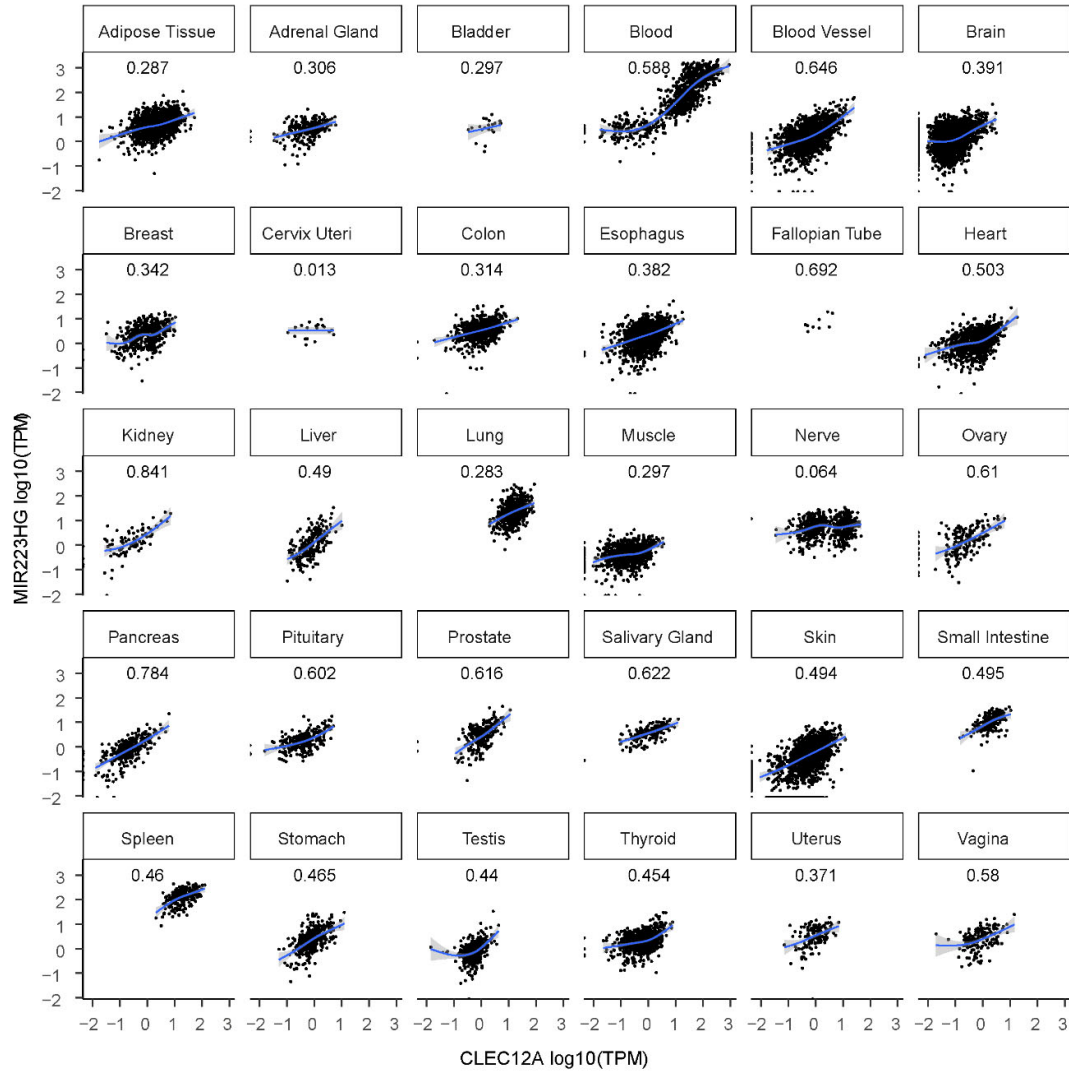


Figure S1: Scatterplots illustrating correlation between *CLEC12A* and *MIR223HG* expression in individual tissues. Transcripts per million (TPM) values were received from the GTex Portal (V8, gtexportal.org). Correlation coefficient was determined using Pearson correlation.

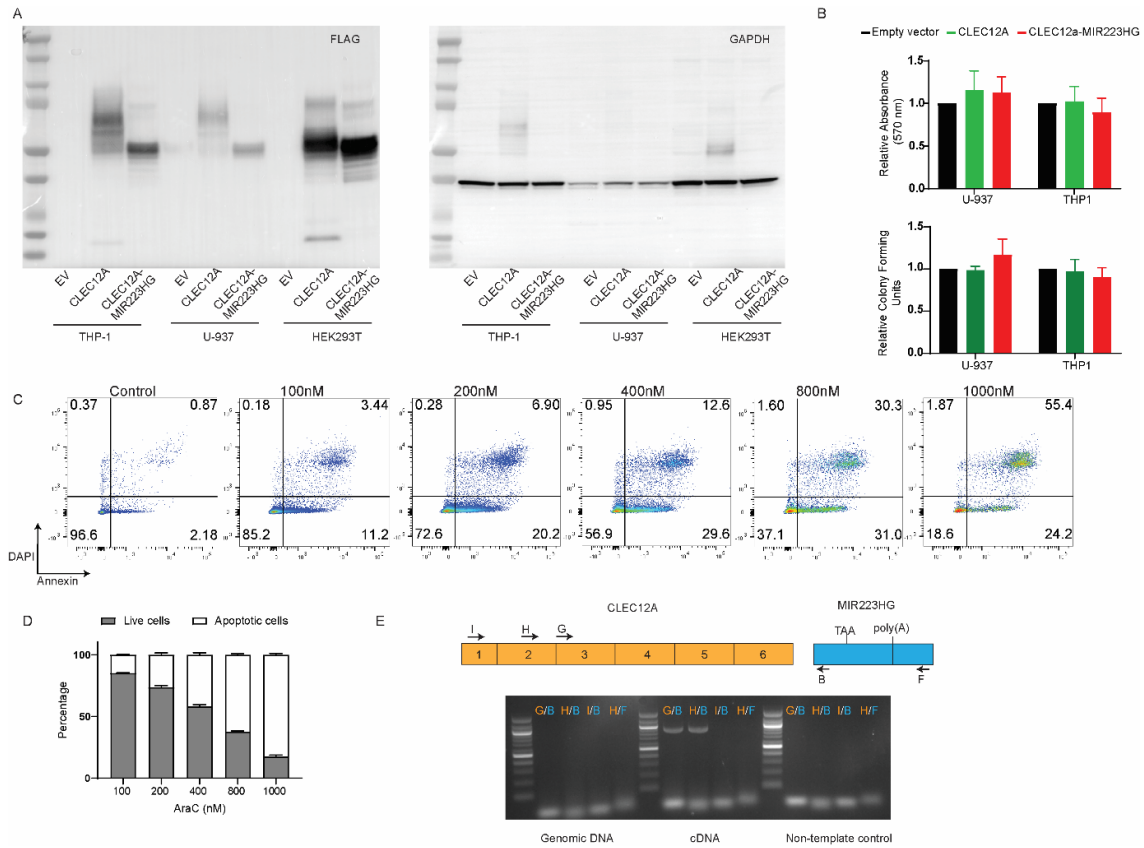


Figure S2 (A) Western blot analysis of lentivirus-mediated overexpression of *CLEC12A* and *CLEC12A-MIR223HG* in THP1, U-937 and HEK293T cell lines. **(B)** MTT and clonogenicity assays on THP1 and U-937 cell lines overexpressing either *CLEC12A* or *CLEC12A-MIR223HG*. **(C)** Dose-dependent increase in the apoptosis of U-937 cells treated with cytarabine (AraC). Representative flow plots are shown at different cytarabine (AraC) doses. **(D)** Percentage of apoptotic U-937 cells treated with different concentrations of AraC. **(E)** PCR on the genomic DNA and cDNA of U-937 cells to detect *CLEC12A-MIR223HG*. Expected amplicons sizes are as follows: G/B: 962 bp and H/B: 829 bp.