Supplementary Table 2. Summary of iCLIP libraries after removal of PCR duplicate reads. For each library, total number of mapped reads, number of reads mapped to all iCLIP peaks, and number of reads mapped to iCLIP peaks in mRNAs were shown. For each cell type, the numbers of iCLIP peaks, the number of target genes and the number of miRNAs detected by iCLIP were shown.

Supplementary Table 5. Previously identified miR-155 targets related to the cell types examined in the current study. Identification of the previously reported targets by iCLIP, and their repression measured by RNA-Seq are displayed in the third and fourth columns, respectively.

Supplementary Table 2. Summary of iCLIP libraries after removal of PCR duplicate reads.

Library	**All Reads**	**All peak reads**	**All mRNA peak reads**
B_ko1	2492126	759636	438815
B_ko2	2689172	905485	512875
B_ko3	2581463	791530	436458
B_ko4	2538658	826296	443815
B_wt1	3364293	1200024	586948
B_wt2	3993056	1377560	620449
B_wt3	4372292	1621935	799756
B_wt4	3431278	1210077	578252
Mac_ko1	1218106	306539	186289
Mac_ko2	1418632	324013	177066
Mac_ko3	1759071	344222	210056
Mac_ko4	1939718	419222	235715
Mac_wt1	3322373	1777171	1398198
Mac_wt2	1639473	571766	390817
Mac_wt3	1906323	906492	711060
Mac_wt4	2187457	933374	696099
DC_ko1	2568315	859275	479790
DC_ko2	2558707	795935	436427
DC_ko3	2325644	873081	501864
DC_ko4	2877463	1178346	657726
DC_wt1	3157114	1691086	1112219
DC_wt2	3215327	1612905	1057164
DC_wt3	6328798	2989323	1908118
DC_wt4	4782506	2382383	1496610
T_ko1	1283140	635013	383042
T_ko2	1029323	525647	309182
T_ko3	1248473	671002	397884
T_ko4	1922192	1044818	659051
T_wt1	4533646	1744234	1001652
T_wt2	2242162	855850	481212
T_wt3	7140239	2971132	1691081
T_wt4	6620193	2477666	1424119
Cell type	**Number of peaks**	**Number of genes**	**Number of miRNAs**
B cell	78372	6879	48
Macrophage	77506	7560	102
Dendritic	77319	5895	109
$CD4^+$ T cell	77594	6356	102

Supplementary Table 5. List of previously known miR-155 targets.

Target	Studied cell type	In iCLIP list	RNA-Seq $\log_2$ (Ko/Wt)
Aicda (AID)	B cell[1, 2], human B cell (Raji)[3]	Yes	B cell (1.23)
Spi1 (PU1)	B cell[4, 5], human dendritic cell[6], macrophage (Raw264.7)[7]	Yes (All)	B cell (0.57), DC (0.69), Mac (0.28)
Inpp5d (SHIP)	Human B cell (DLBCL)[8], B cell[9], macrophage (Raw264.7)[10]	Yes (All)	B cell (0.21), Mac (0.26)
Atg3	Human dendritic cell[11]	Yes	DC (0.15)
Tab2	Human dendritic cell[12]	Yes	DC (0.54)
Peli1	Human dendritic cell[12]	Yes	DC (0.71)
Bach1	Human dendritic cell[12], macrophage (Raw 264.7)[7]	Yes (All)	DC (1.03), Mac (0.78)
Arg2	Dendritic cell[13]	Yes	DC (2.23)
Jarid2	B cell[14], human B cell[15], macrophage (Raw264.7)[7], T cell[16]	Yes (All)	B cell (0.90), Mac (0.99), T cell (0.80)
Cebpb	B cell[9], human dendritic cell[12], macrophage (Raw264.7)[7]	Yes (All)	B cell (0.96), DC (-1.07), Mac (0.41)
Sla	Macrophage (Raw264.7)[7]	Yes	Mac (0.30)
Cux1	Macrophage (Raw264.7)[7]	Yes	Mac (0.21)
Arntl	Macrophage[7, 17]	Yes	Mac (0.32)
Hif1a	Macrophage (Raw264.7)[7]	Yes	Mac (-0.15)
Picalm	Macrophage (Raw264.7)[7]	Yes	Mac (0.89)
Bcl6	Macrophage (Raw264.7)[18]	Yes	Mac (0.18)
Ets1	T cell[19]	Yes	T cell (0.32)
Fosl2	T cell[20]	Yes	T cell (0.13)
Ikbke	B cell[21], Macrophage[22]	Yes (All)	B cell (0.12), Mac (-0.03)
Cd1d1 (Cd1d)	Dendritic cell[23]	Yes	DC (0.64)
Csf1r	Macrophage (Raw 264.7)[7]	No	Mac (0.15)
Gcsam (HGAL)	Human B cell[24]	No	B cell (undetectable)
Socs1	macrophage (Raw264.7)[25], T cell[26]	No	Mac (-0.04), T cell (-0.07)
Hdac4	Human T cell (Jurkat)[27]	No	T cell (0.01)
S1pr1	Human T cell (Jurkat)[28]	No	T cell (0.55)
Casp3	Macrophage (Raw267.4)[29]	No	Mac (0.19)
Rheb	Macrophage (Raw264.7)[30]	No	Mac (0.02)

Supplementary Table 9. List of nucleic acid sequences.

iCLIP	
L32	/5rApp/GTGTCAGTCACTTCCAGCGG/3ddc/
RT primers (4-letter barcode underlined)	/5Phos/DDDCGATNNNNNNNAGATCGGAAGAGCGTCGT/idSp/CCGCTGGAAGTGAC
PCR forward primer	AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCT
PCR reverse primer	CAAGCAGAAGACGGCATACGAGATCTCGGCATTCCTGCGCTGGAAGTGACTGACAC
Sequencing primer read 1	ACACTCTTTCCCTACACGACGCTCTTCCGATCT
Sequencing primer read 2	TCGGCATTCCTGCGCTGGAAGTGACTGACAC
PolyA-Seq	
RT_1	CCGTGTGGTCGCCTTTTTTTTTTVN
Ext_primer_1	ACGACGCTCTTCCGATCTNNNNNN
PCR forward primer	AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCT
PCR reverse primer (5-letter barcode underlined)	CAAGCAGAAGACGGCATACGAGATAAAGCTTCTGGCCCGCTGACCCGTGTGGTCGCCTTTTT
Sequencing primer read 1	ACACTCTTTCCCTACACGACGCTCTTCCGATCT
Sequencing primer read 2	TTCTGGCCCGCTGACCCGTGTGGTCGCCTTTTTTTTTT
Sequencing primer index	AAAAGGCGACCACACGGGTCAGCGGGCCAGAA

Supplementary Table 10. List of nucleic acid sequences of primers and synthesized 3'UTR.

Name	Sequence
Actr10	ACGCTTGAATACATCCAGCC……AGATATGTTGTATTTATATC
Act10_mut_F	GTATTTTCTCTTTcgtaTAATATTTAATTCATCTGAC
Act10_mut_R	tacgAAAGAGAAAATACAGAAATGCTTTG
Hif1a_F	TGGTGGCTCAGCAGTCTA
Hif1a_R	GCCTGGTCCACAGAAGATGTTTAT
Hif1a_mut_F	GAGTAATTTTAGAAcgtaTATTTTAGGAATATAGAGTTG
Hif1a_mut_R	tacgTTCTAAAATTACTCACTTATTG
Jarid2_F	TCTCAACAAACCCACACCAAAAA
Jarid2_R	CGAACGGATGCATAGTGA
Jarid2_mut_F	GAACTGATTTTGTTTTAcgtaTAAACTGTTCAAGTTTTTGTACG
Jarid2_mut_R	tacgTAAAACAAAATCAGTTCTCTAAAACC
Terf1	GACACTGGAGGCTGGATGG……ATACAAAAGAGTCTAATAAG
Terf1_mut_F	TAATGATAAAcgtaTATGGTGGTGGTGGG
Terf1_mut_R	tacgTTTATCATTACTGACCAGGA
Tbca_F	TGACATTTTTCTGTATGGGATG
Tbca_R	TGGCCAACTGAAAATTTGGT
Tbca_mut_F	GGGATGTTTTTTTcgtaTAAATCCTGGGGTCCATTCTAC
Tbca_mut_R	tacgAAAAAAACATCCCATACAGAAAAATG
Uqcrfs1	ACACGTGGACTCAGGGCCTA……TGTCTTTGATAGCTAATTCT
Uqcrfs1_mut_F	ATATTATCAAcgtaTAGCATAATAAAACC
Uqcrfs1_mut_R	tacgTTGATAATATTTAACAGTGAATTC
Zfp277	GAGAAGCTGCTGCAGGCACA……ATTTTTCAAGAAATAAGAAA
Zfp277_mut_F	TGTCCACACAcgtaTATTCACGGCTGAAATC
Zfp277_mut_R	tacgTGTGTGGACAATCAAATCTGAAC

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