SUPPLEMENTAL MATERIAL

Tagawa et al., http://www.jem.org/cgi/content/full/jem.20160248/DC1

```
IL12B mut (BART1-3p)
 target 5'
           AAUAUGGCUCCAUGAAGGUGCUAC 3
            1:11:1111 11: 1111111
 miRNA
           CUGUAUCACC UAUCGCCACGAU
            |:||:||| ||: |XXXX||
          AAUAUGGCUCCAUGAAGCACGUAC 3
 mut
IL12B mut (BART2-5p)
 target 5'
           :11111
 miRNA
            CGUUC CCG
                                    С
                                                  UUACGU
                                                          CUUUUAU 5'
                                                          |XXXX|
            111:1:111
                                                  :11111
           mut
           AGCAUGUUUGAACCUGAUACACAAUUAUGACCAGAAAAUAU 3
            111 1 :11
                                      \Pi\Pi
                                           1111111111
 miRNA
            CGUUCCCGCU
                                      UAC
                                          GUCUUUUAU
                                           HIXXXXII
            111 \cdot 1 \cdot : 11
                                      111
          AGCAUGUUUGAACCUGAUACACAAUUAUGACCAGUUUUUAU 3'
IL12B mut (BART10-3p)
 target 5' UCAGCUAAU
                           UUAUGUAU 3
                                                    GGGCCUUCAUGCUAUUUAAAUAUUUAAGUAAUUUAUGUAU 3
                                         target 5
 miRNA
           UGUCGGUUGAGGUACCAAUACAU
                                         miRNA
                                                   UGUCGGUUGA
                                                               GGUA
                                                                                CC
                                                                                     AAIIACAII
                                                                                     I I XXXXI
            1111:111
                           I I XXXXI
                                                     :111
                                                               1:11
           UCAGCUAAU
                           UUUACAAU 3'
                                                    GGGCCUUCAUGCUAUUUAAAUAUUUUAAGUAAUUUUACAAU 3'
 mut
                                         mut
IL12B mut (BART22)
                                                       IL12B mut (BHRF1-2)
             GGCUGAACUAAUAAAAACUCUUCUUUGUAAU 3'
 target 5'
                                                        target 5'
                                                                           AGACCCAAAAAGAUAA 3'
              :111 11:1
                                   11111111
                                                                           1 11
                                                                                UGAUGAUCUGGUACU
                                                               3' AGUUAAAGAC GGCGUUUUCUAU
                                   GAAACAUU
                                                        miRNA
                                   | | XXXX | |
                                                                                11111111
              :111 11:1
                                                                           1.11
             GGCUGAACUAAUAAAAACUCUUCUAACAAAU 3
                                                                5 '
                                                                           AGACCCAAATTCTUAA 3
                                                       IFI30 mut (BART1-3p)
IFI30 mut (BART1-5p)
 target 5'
            CCACCCCAUGAUCAAGAAUCCUGCUCCACUAAGAA 3'
                                                         target 5
                                                                                AUGGUGCUAA 3
                11:1-111
                                11 11111111111
                                                                                 :1111111
 miRNA
             GUGUCGUGC AGU
                                GA
                                    AGGUGAUUCU
                                                         miRNA
                                                               3 ' CUGUAUCACCUAUCGCCACGAU
             11 11:1 111
                                II IIIIIXXXXII
                                                                                 : IXXXXII
            CCACCCCAUGAUCAAGAAUCCUGCUCCAGAUUGAA 3
                                                                                AUGCACGUAA 3
 mut
LGMN mut (BART2-5p)
 target 5'
            AGAGGGCCGCAAGCCCCAAAUGGAAAACUGUUUUUUAGAAAAUAU 3
             :11111
                                   111
                                         11:
                                                \Pi\Pi\Pi\Pi\Pi\Pi
 miRNA
           CGUUCCCG
                                   CUU
                                         ACG
                                                UCUUUUAU
             :11111
                                   III
                                         11:
                                                I I XXXXX I I
 mut
            AGAGGGCCGCAAGCCCCAAAUGGAAAACUGUUUUUAGUUUUAU 3
CTSB mut (BART2-5p)
 target 5
           CCAAGUGGUCAGGAGUUGUUUCUGACCCACUGAUCUCUACUACCACAAGGAAAAUAG 3
            HIII II:
                                          11:
                                                            :1111111
 miRNA
           CGUUC CCGCAGCUUUUGUUUCUGACCCACACAGCUCUACUACCACAAUCUUUUAU
                                          11:
           CCAAGUGGUCAGGAGUUGUUUCUGACCCACUGAUCUCUACUACCACAAGGUUUUUUAG 3
 mut
CTSB mut (BHRF1-2)
 target 5
                        AGAAAGAUGC 3
                                                        ACGAGAAUC GCUUGAACCUGGGAGGCAGAGGAUGC 3
                                              target 5'
                         :111111:
                                                               11 11:
                                                                                  111:1:111:
                                                         1:1
 miRNA 3' AGUUAAAGACGGCGUUUUCUAU
                                                        AGUUAA AGACGG
                                                                                  CGUUUUCUAU
                         : [XXXX]:
                                                        |:| || ||: ||||XXXX|:
ACGAGAAUC GCUUGAACCUGGGAGGCAAUUCUUGC 3
 mut
                        AGAUUCUUGC 3
                                              mut
```

Figure S1. **miRNA binding sites and mutations in 3'-UTR reporters.** Partial sequences of 3'-UTRs of selected transcripts, which were analyzed in Fig. 3 A and Fig. 5 (A and B) are shown together with corresponding miRNAs and mutations within the 3'-UTRs in reporter vectors. Complementarities are based on in silico predictions according to the RNAhybrid algorithm and depicted as Watson-Crick ('|') or G:U (':'). Nonmatching nucleotide residues are indicated (X). They result from mutated mRNA target sequences in the reporter plasmids.

JEM S17

JEM

Table S1, available as an Excel file, is a list of gene transcripts down-regulated by EBV miRNAs in infected B cells. Transcript IDs (Ensembl Annotation Release 75), corresponding gene symbols, mean of log_2 fold changes, and z-scores are shown. In addition, transcripts are indicated (yes/no) according to the criteria of the RISC-IP enrichment score as defined in the Materials and methods.

Table S2. Donor HLA alleles

Donor	HLA class I	HLA class II
MB	n.a.	DRB1*0301,*0701
JM	n.a.	DRB1*0801,*1301; DQB1*0402,*0603; DPB1*0401,*1301
32	A*0201,*0301; B*3501,*1501; C*0102, *0401	DRB1*1501,*0701; DQB1*0602,*0303; DPB1*0401

List of the donors' HLA alleles (determined by MVZ Martinsried, Germany) whose B and T cells have been used in co-culture experiments in this study. The HLA alleles were identified by deep-sequencing. n.a., not available.