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Supporting Information for

Global epigenomic analysis of KSHV-infected primary effusion lymphoma identifies functional MYC super-enhancers and enhancer RNAs

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Supplementary Information

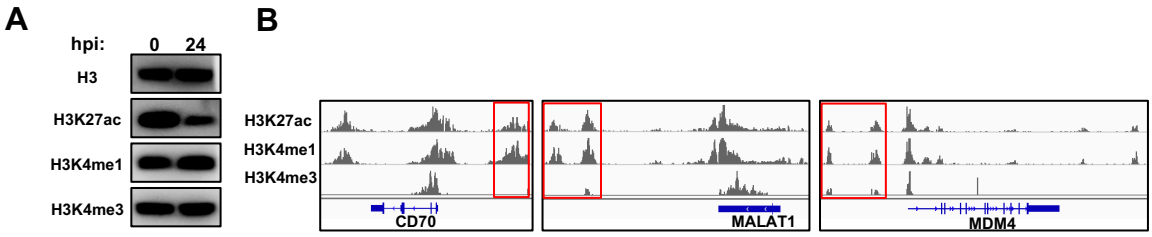

Fig. S1. (A) Immunoblot analysis of total H3 and H3 modification levels in TRExBCBL1-RTA cells during latency and lytic replication (induced by doxycycline for 24 h). (B) Three strongest super-enhancers (red box) in TRExBCBL1-RTA cells during latency showing high levels of H3K27ac and H3K4me1 ChIP-seq signals relative to H3K4me3 signals.

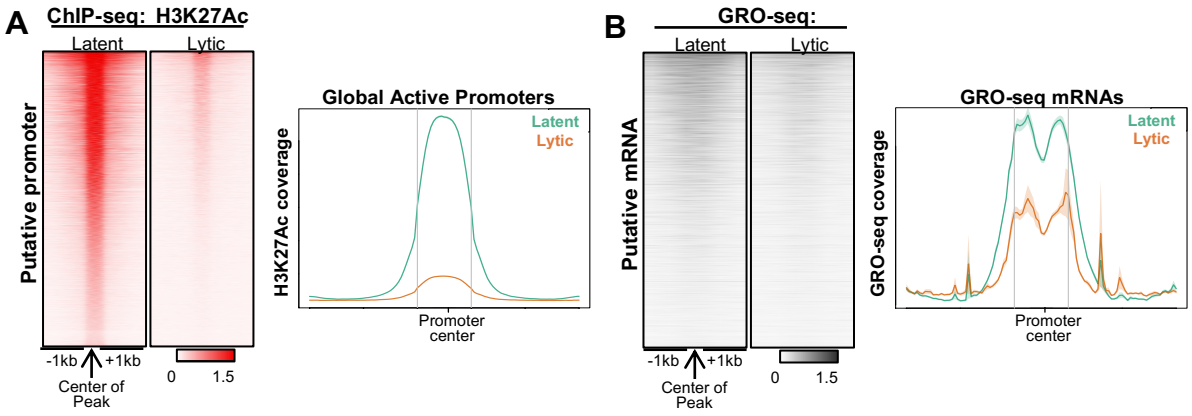

Fig. S2. (A) Left: Heatmap of H3K27ac ChIP-seq signals at putative active promoters in TRExBCBL1-RTA cells during latency and lytic replication induced by doxycycline for 24 h; each row represents one promoter region. Right: Density plot of average ChIP-seq signals in 10 kb windows around the center of promoter of KSHV latent-infected (green) or lytic-infected (orange) cells. (B) Left: Heatmap of GRO-seq signals at putative active promoters identified in A. Right: Density plot of average GRO-seq signals in 10kb windows around the center of promoter of KSHV latent-infected (green) or lytic-infected (orange) cells.

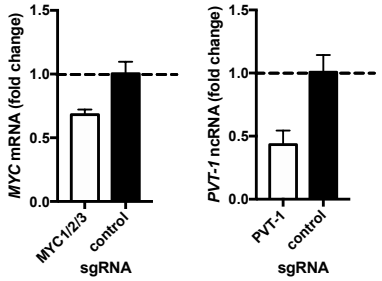

Fig. S3. CRISPRi-mediated depletion. dCas9-KRAB-MYC-sgRNA or dCas9-KRAB-PVT1-sgRNA was used to test system efficacy in TRExBCBL1-RTA cells. 3 different sgRNAs were mixed to repress *MYC* mRNA.

Table S1. Primers used for qPCR assays.

Primer name	Fwd	Rev	Assay
18S	TTCGAACGTCTGCCCTATCAA	GATGTGGTAGCCGTTTCTCAGG	RT-qPCR
MYC	AGAGTTTCATCTGCGACCCG	AAGCCGCTCCACATACAGTC	RT-qPCR
MYC_e486	GCCCTGTGAAACCTAATGACA	AAGAGGGCATGGAGAGTGATT	RT-qPCR, ChIP-qPCR, ddPCR
MYC_e507	CCCACCGTGATTCTGAGG	CACACCCAAGACTGGGAAG	RT-qPCR, ChIP-qPCR, ddPCR
MYC_e530	GAATCCATTCAGCCTTTGCT	TCTGTCCTCCTTGGGCTCT	RT-qPCR, ChIP-qPCR, ddPCR
LANA	GAGTCTGGTGACGACTTGGAG	AGGAAGGCCAGACTCTTCAAC	RT-qPCR
RTA	TTGCCAAGTTTGTACAACTGCT	ACCTTGCAAAGACCATTCAGAT	RT-qPCR
K2	TCACTGCGGGTTAATAGGATTT	CATGACGTCCACGTTTATCACT	RT-qPCR
ORF 25	ACAGTTTATGGCACGCATAGTG	GGTTCTCTGAATCTCGTCGTGT	RT-qPCR
cellular IRF4	GGCCAGAGGAAAAACATTGA	ATCCTGCTCTGGCACAGTCT	RT-qPCR
viral IRF4	GAGCTCCTCAACCAGACAGG	GCTGACTATCAGGGGGATCA	RT-qPCR
PANRNA	GAATCCATTCAGCCTTTGCT	TCTGTCCTCCTTGGGCTCT	RT-qPCR, ddPCR

Table S2. Primers used for 3C & 4C-seq assays.

Primer name	Fwd	Rev
3C-e486	CAGCCGAGCACTCTAGCTCT	CCAAAGCACTGACACCTGTG
3C-e507	CAGCCGAGCACTCTAGCTCT	AGGTTGGCCAGCATAGACAC
3C-e530	CAGCCGAGCACTCTAGCTCT	CAGAAAGTCCCTCAAGGTGG
4C-mycPromoter	GTTCAGAGTTCTACAGTCCGACGATC AGCTGCTGGGAGGAGACATG	AGACGTGTGCTCTTCCGATCT CCACGTCCTAACACCTCTAG
4C-mycEnhancer	GTTCAGAGTTCTACAGTCCGACGATC CTCATCTGCCGAAGCCTTT	AGACGTGTGCTCTTCCGATCT CTGCTGCTCATTTGCATAATG

Table S3. shRNA and sgRNA sequence.

Primer name	Fwd	Rev
shRNA-e486	GGAGGACATGACAGCAGAAGT	ACTTCTGCTGTCATGTCCTCC
shRNA-e507	GCCTGCCACATAACATCAATC	GATTGATGTTATGTGGCAGGC
shRNA-e530	GCTCTGCTTTGCTAGTTATCT	AGATAACTAGCAAAGCAGAGC
sgRNA-e486	GCTTACAAGCCACAGTGTTC	ACCCCCGCAAGTTTCATAGA
sgRNA-e507	GGAGTCACAATACATTGGAG	CAGCCTATGGATGCAAGCTA
sgRNA-e530	CACCACGTAACCTTCCACCT	ATCCACTGGCAACCATTCAC
sgRNA-MYC1	GCGAAGCCCCCTATTCGCTC	CGAAAACCGGCTTTTATACT
sgRNA-MYC2	AGGACGCGACTCTCCCGACG	TCGCATTATAAAGGGCCGGT
sgRNA-MYC3	AGCTATCCCCTAAAGCGGCT	GCTATCTCGGAGACGCACTT
sgRNA-PVT1	TCCTCCGGGCAGAGCGCGTG	CCACACGCGCTCTGCCCGGA