

**Supplementary Table S3.** Expression profiles of the predicted targets in infected cells. The profiles were retrieved from the NCBI GEO Profiles database. For each target, the GEO record ID, the virus, the mean value in the control sample (not infected), the mean value in the infected cell and the infected/control ratio are shown. Only values less than 1 are reported, since they indicate that the gene is under-expressed in the infected sample, compared to the control cell.

Gene	GEO Record	Virus	Mean (Control)	Mean (Infected)	Ratio (I/C)
ABL1	GDS989 - 1636_g_at	EBV	5928.75	3531.80	0.59
	GDS989 - 39730_at	EBV	5839.95	3504.20	0.60
	GDS989 - 1635_at	EBV	2786.60	1428.30	0.51
	GDS940 - 202123_s_at	KSHV	406.35	246.35	0.60
APC	GDS940 - 203525_s_at	KSHV	110.60	63.90	0.57
BCL10	GDS940 - 205263_at	KSHV	637.50	439.55	0.68
BID	GDS940 - 204493_at	KSHV	263.25	140.40	0.53
BTG3	GDS940 - 213134_x_at	KSHV	471.05	233.25	0.49
CCNG2	GDS989 - 1913_at	EBV	2690.40	1679.80	0.62
	GDS940 - 211559_s_at	KSHV	109.65	98.55	0.89
CDKN2C	GDS940 - 204159_at	KSHV	116.10	68.95	0.59
CUL1	GDS940 - 207614_s_at	KSHV	266.50	214.25	0.80
CUL2	GDS989 - 37894_at	EBV	817.95	454.50	0.55
	GDS940 - 203079_s_at	KSHV	254.00	164.40	0.64
CUL3	GDS940 - 201371_s_at	KSHV	766.05	533.75	0.69
CUL4A	GDS940 - 201423_s_at	KSHV	270.50	208.75	0.77
CUL5	GDS940 - 203531_at	KSHV	323.30	256.55	0.79
EI24	GDS940 - 216396_s_at	KSHV	349.60	202.05	0.57
FAF1	GDS940 - 218080_x_at	KSHV	205.95	123.65	0.60
FOXO3A	GDS940 - 204132_s_at /	KSHV	62.15	55.60	0.89
HBP1	GDS940 - 209102_s_at	KSHV	281.35	274.65	0.97
ING1	GDS940 - 209808_x_at	KSHV	73.90	61.05	0.82
MAPK1	GDS989 - 976_s_at	EBV	1619.10	898.90	0.55
	GDS940 - 212271_at	KSHV	750.10	399.50	0.53
MPHOSPH1	GDS940 - 205235_s_at	KSHV	120.15	54.95	0.45
RAD1	GDS989 - 36857_at	EBV	2365.45	1954.6	0.82
	GDS940 - 204461_x_at	KSHV	176.50	77.55	0.43
	GDS940 - 204460_s_at	KSHV	136.75	73.85	0.54
	GDS940 - 210216_x_at	KSHV	158.55	102.85	0.64
RASSF1	GDS940 - 204346_s_at	KSHV	116.65	73.90	0.63
RB1	GDS989 - 2044_s_at	EBV	1307.35	1149.60	0.87
	GDS940 - 203132_at	KSHV	157.80	140.90	0.89
	GDS940 - 211540_s_at	KSHV	50.60	44.70	0.88
RBBP8	GDS940 - 203344_s_at	KSHV	200.60	112.40	0.56
SMAD3	GDS940 - 205398_s_at	KSHV	314.75	157.80	0.50
STK3	GDS940 / 208855_s_at	KSHV	933.70	642.40	0.68
STK4	GDS940 - 211085_s_at	KSHV	19.65	12.10	0.61
TP53	GDS989 - 1974_s_at	EBV	1712.40	1561.70	0.91
	GDS989 - 1974_s_at	KSHV	1712.40	1530.25	0.89
	GDS940 - 201746_s_at	KSHV	405.70	370.00	0.91
ZAK	GDS940 - 218833_at	KSHV	42.50	30.25	0.71