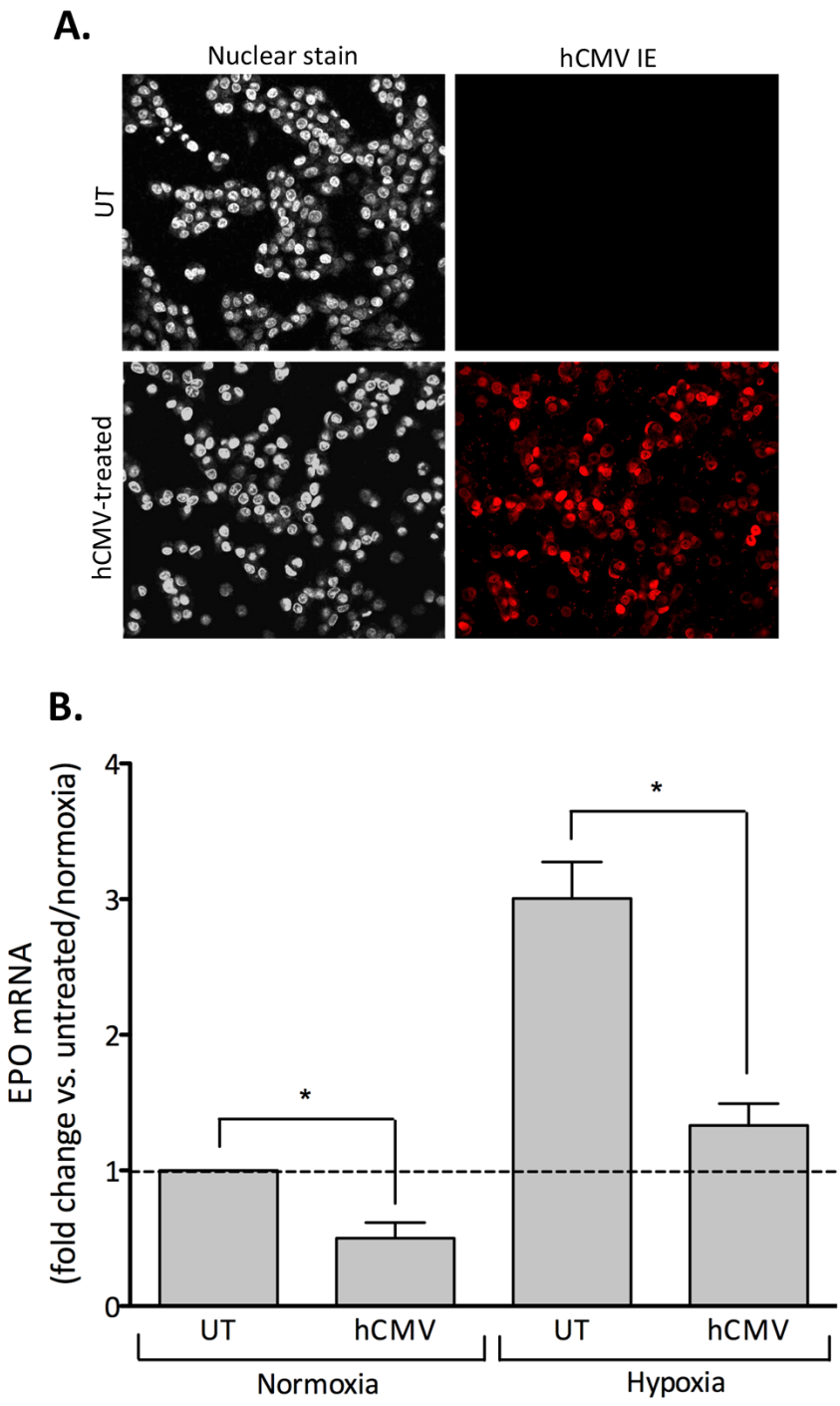
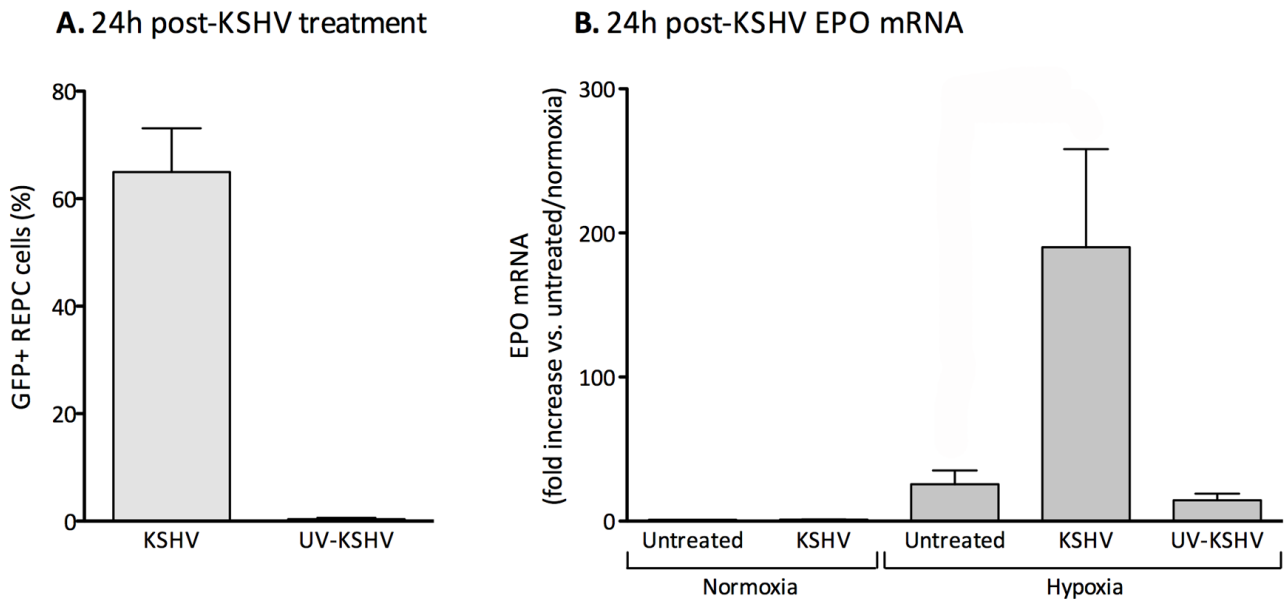
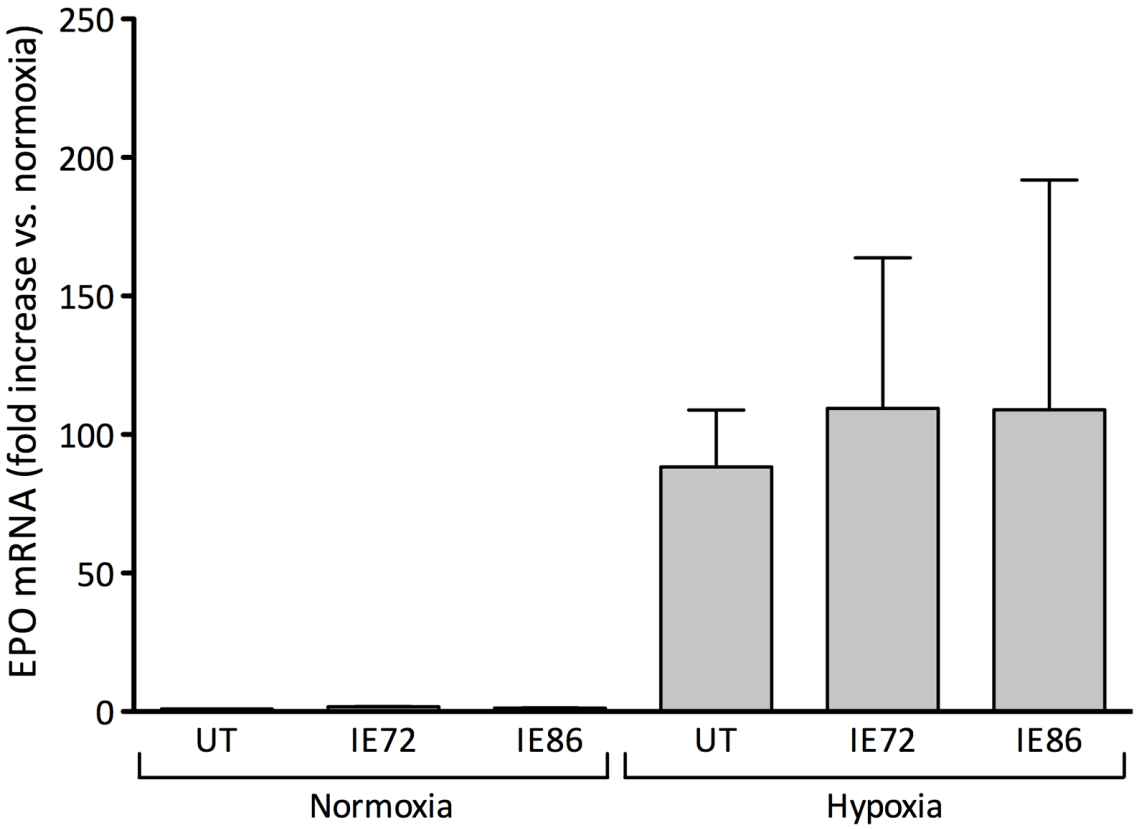


Supplementary Figure 1. hCMV inhibits EPO mRNA production in HepG2 cells. HepG2 were mock infected or treated with hCMV at a MOI of 5 and cultured for 24h. Immunocytochemistry was used to confirm expression of hCMV immediate early protein **(A)** or EPO mRNA expression following an additional 18-20h exposure to 1% O_2 or maintenance at normoxia for 18-20h was quantified (plotted relative to the untreated control under normoxic conditions) (**B**). Data are mean ± SEM from 3 independent experiments. *p< 0.05



Supplementary Figure 2. rKSHV.219 does not inhibit HEPC EPO mRNA under conditions of hypoxia. Cells were treated with rKSHV.219, or UV-inactivated rKSHV.219, at a MOI of 1 and cultured for 24h prior to measurement of the % of cells expressing GFP **(A),** or the expression of EPO mRNA following exposure to 1% O_2 for 18-20h (plotted relative to the untreated control under normoxic conditions) **(B)**. Data are mean ± SEM from 3 independent experiments.



Supplementary Figure 3. Overexpression of hCMV IE 72 or IE86 does not inhibit HEPC EPO production under conditions of hypoxia. Cells were treated with overexpression vectors for hCMV IE72 or IE86 and cultured for 24h prior to exposure to 1% O_2 or maintenance at normoxia for 18-20h, before analysis of EPO mRNA production Data are mean ± SEM from 3-4 independent experiments.

Supplementary Table 1. Patient Characteristics

Patient characteristics	**Patients with stage 4 renal failure (n = 13)**
Mean age (years, ±SD)	61 ± 15
Gender [n (%)]	
Male	9 (69.0)
Female	4 (31.0)
Cause of renal insufficiency [n (%)]	
Vasculitis	3 (23.0)
Lupus nephritis	3 (23.0)
Membranous glomerulonephritis	2 (15.0)
Diabetes	1 (8.0)
Biochemical parameters	
CMV IgG (IU, ± SD)	0.35 ± 0.2
EPO (U/mL, ± SD)	6.3 ± 3.5
White blood cell count (10^9 cells/L, ± SD)	7.3 ± 2.4
Neutrophils (10^9 cells/L, ± SD)	4.4 ± 1.7
Lymphocytes (10^9 cells/L, ± SD)	2.0 ± 1.0
Monocytes (10^9 cells/L, ± SD)	0.7 ± 0.2
Hematocrit (%, ± SD)	37.4 ± 6.3
Red blood cells ($x10^{12}$/L, ± SD)	4.0 ± 0.8
Hemoglobin (g/dL, ± SD)	12.5 ± 2.5
MCV (fL, ± SD)	93.2 ± 5.4
MCH (pg, ± SD)	31.1 ± 1.4
RDW (%, ± SD)	14.2 ± 1.1
Platelets ($x10^3$/µL, ± SD)	188.1 ± 73.8

MCV, mean corpuscular volume; MCH, mean corpuscular hemoglobin concentration; RDW, red blood cell distribution width

Supplementary Table 2. Hematological characteristics of mice with systemic mCMV infection.

Variable	Non-infected (n=7)	1 week after infection (n=10)	6 weeks after infection (n=8)	*P*
WBC (10^3/μl)	2.42 ± 1.02	2.43 ± 1.84	1.49 ± 0.68	0.29
Hemoglobin (g/dL)	13.77 ± 0.63	13.46 ± 1.24	13.58 ± 1.26	0.85
Hematocrit (%)	41.59 ± 1.86	42.77 ± 2.91	42.31 ± 3.29	0.70
RBC (10^6/(L)	8.99 ± 0.40	9.33 ± 0.84	9.53 ± 1.04	0.47
Corpuscular volume (fL)	46.24 ± 0.61	45.96 ± 1.42	44.96 ± 1.18	0.10
Corpuscular hemoglobin (pg)	15.31 ± 0.07	14.42 ± 0.20	14.41 ± 0.19	<0.0001
Corpuscular hemoglobin concentration (g/dL)	33.1 ± 0.38	31.43 ± 0.95	32.05 ± 0.67	0.0007
RDW-SD (fL)	30.97 ± 0.67	32.16 ± 1.22	33.19 ± 1.30	0.004
Red blood cell distribution width (%)	22.04 ± 0.55	22.55 ± 0.66	23.5 ± 1.44	0.02
Platelet count (10^3/μl)	721.29 ± 78.00	983.30 ± 180.63	659.13 ± 134.25	0.0002
Platelet distribution width (fL)	7.94 ± 0.87	6.81 ± 0.21	6.98 ± 0.34	0.0004
Platelet volume (fL)	6.73 ± 0.30	6.21 ± 0.17	6.25 ± 0.28	0.0007
Platelet large cell ratio (%)	6.19 ± 2.19	3.33 ± 1.05	3.51 ± 1.65	0.0034
Plateletcrit (%)	0.61 ± 0.13	0.41 ± 0.07	0.48 ± 0.05	0.0006

Values are mean ± SD.

WBC, white blood cell count; RBC, red blood cell count, RWD, red cell distribution width