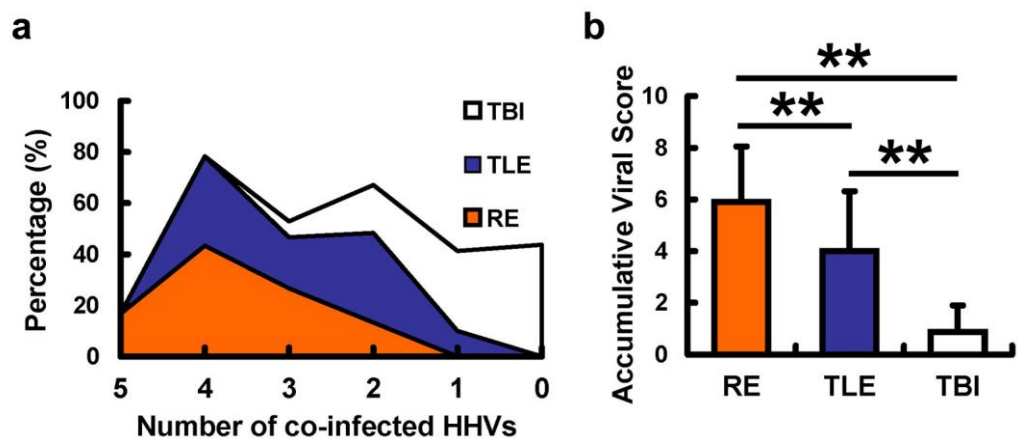
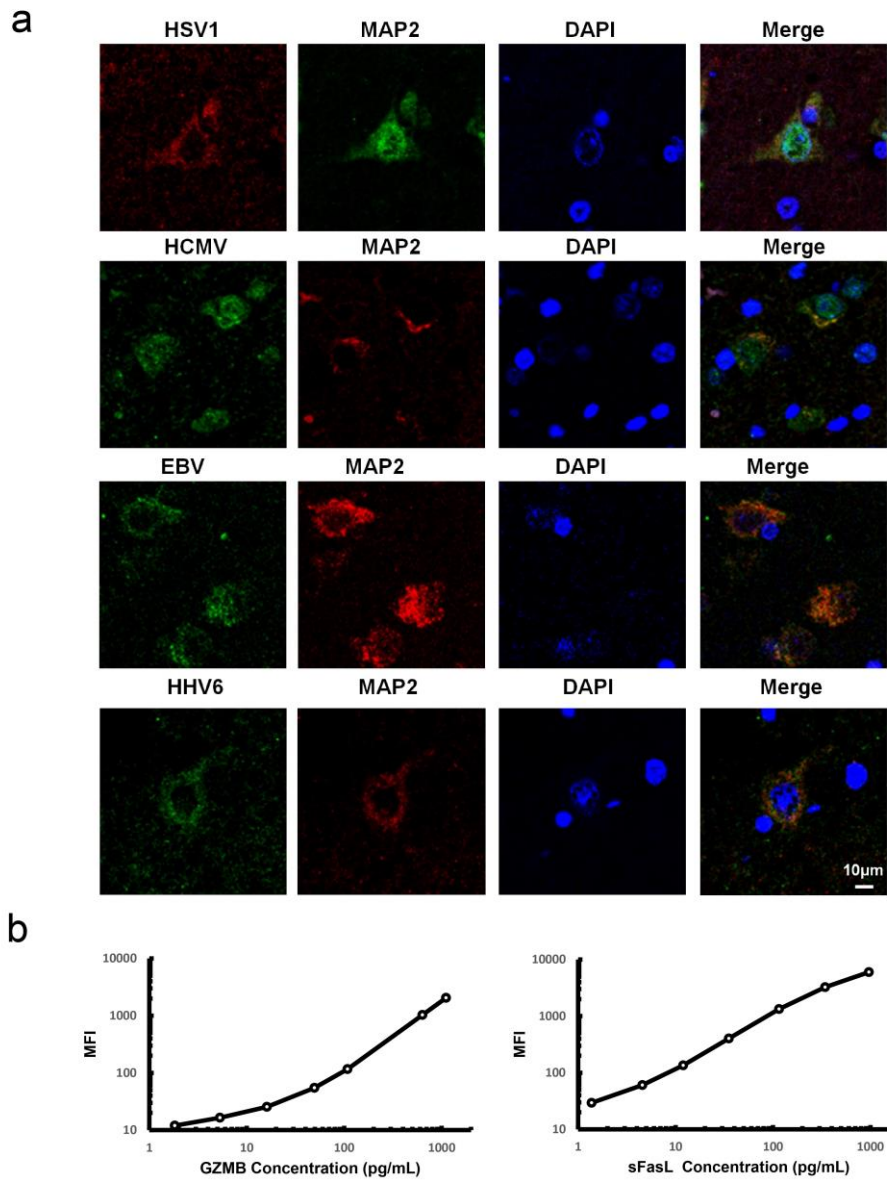


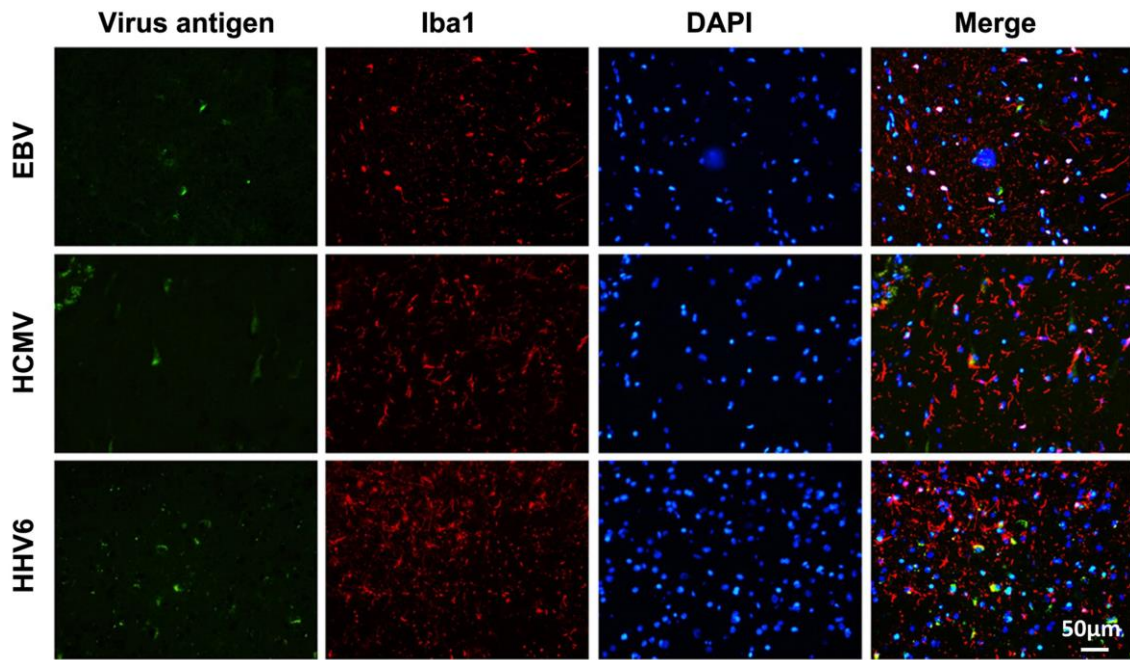
Supplementary Figure and Table



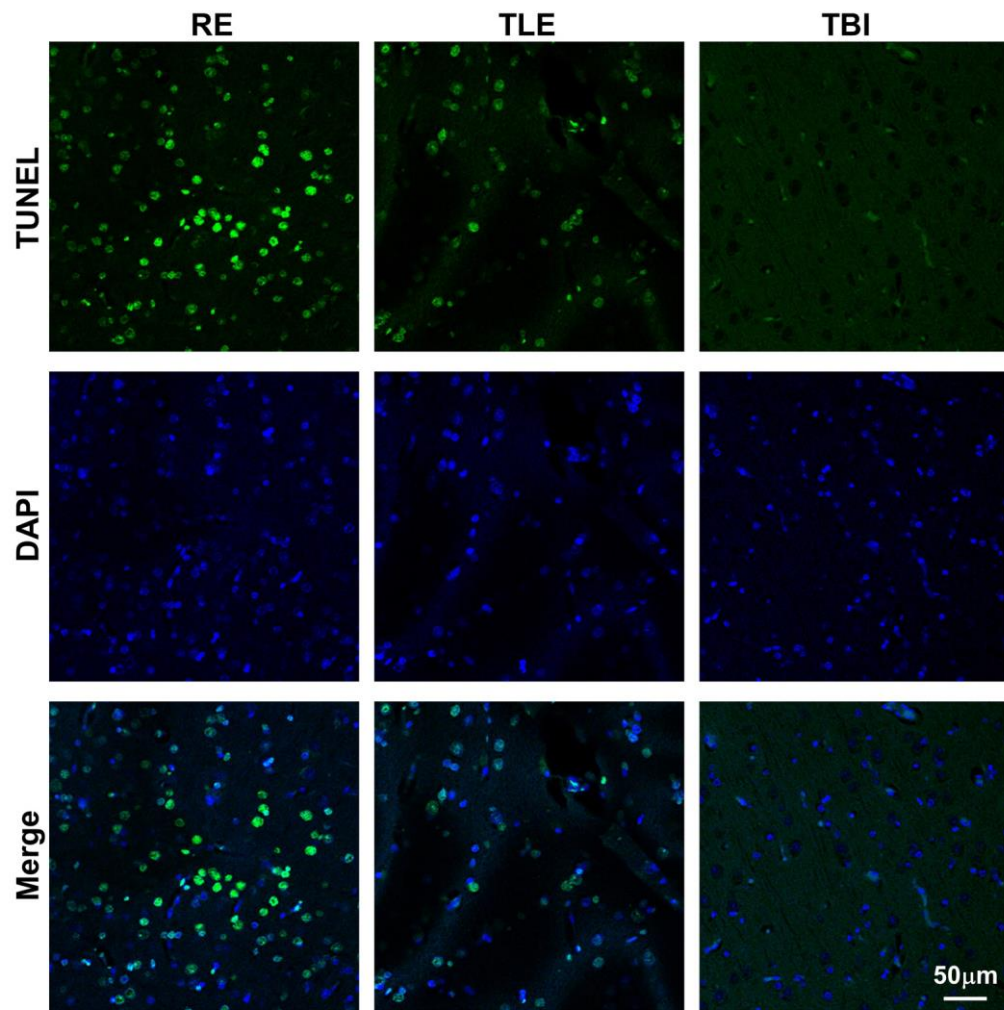
Supplementary Figure 1. The coinfection of HHVs in RE and TLE. (a) Coinfection by more than one HHVs in RE, TLE and TBI cases. (b) The cumulative viral scores, which were the cumulative scores of coinfecting HHVs in a single case, were expressed as mean $\pm$ STD and analyzed with a two-tailed Student t test (**: $p < 0.01$).



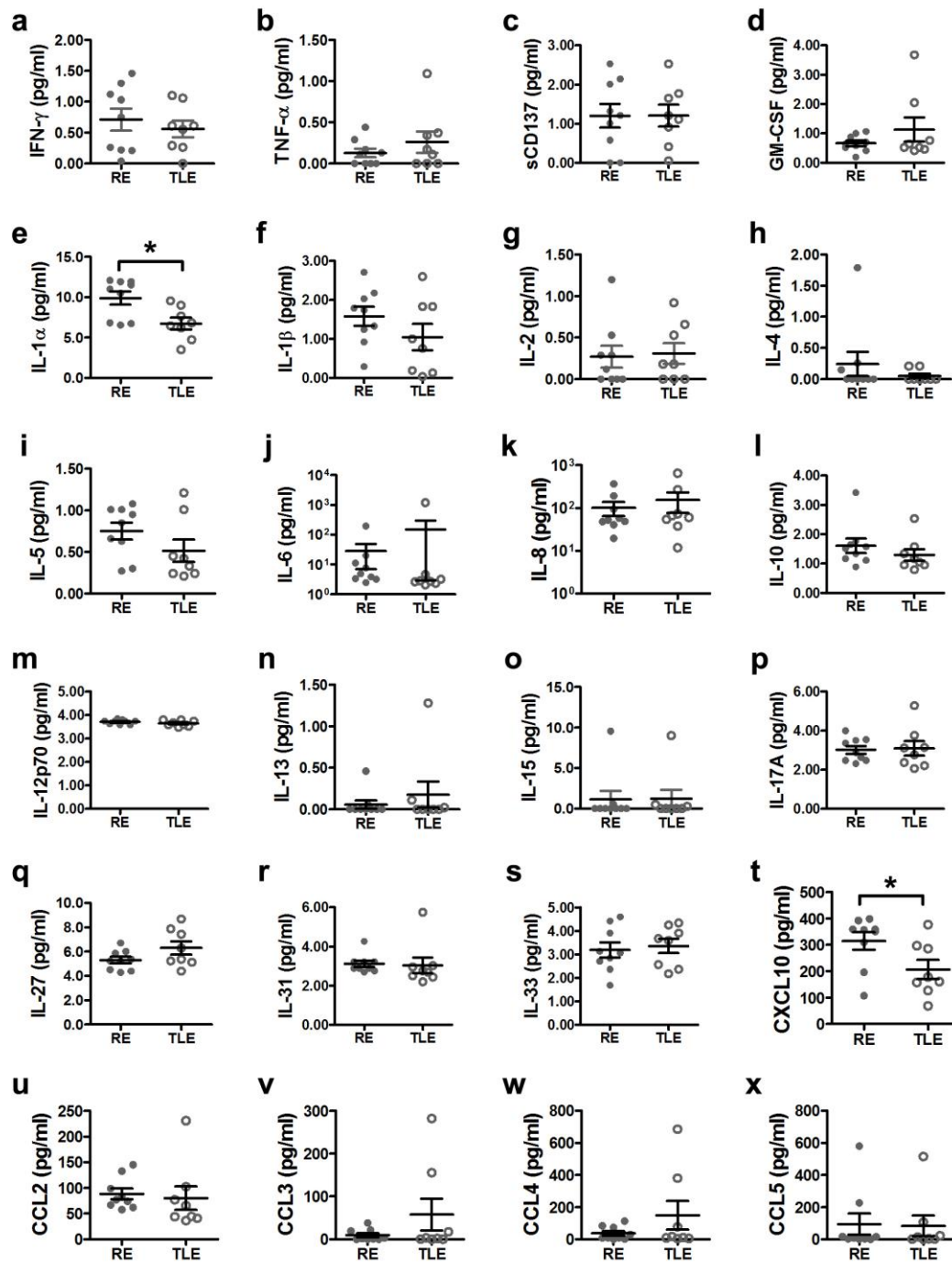
Supplementary Figure 3. (a) Coimmunostaining with antibody against neuron marker microtubule-associated protein (MAP) 2 and antibodies for various HHVs. Cell nuclei were visualized with DAPI. Bar: 10 μ m. **(b)** Standard curve of Granzyme and sFasL in AimPlex Human Multiplex Immunoassay.



Supplementary Figure 4. The colocation of microglia with antigens of HHVs in RE and TLE brain tissues. Coimmunostaining with antibody against Iba1 and antibodies against various HHVs. Cell nuclei were visualized with DAPI. Bar: 50 μ m.



Supplementary Figure 5. Apoptosis from representative RE, TLE and TBI brain samples was analyzed using an In Situ Cell Death Detection Kit, and visualized by fluorescence method. Bar: 50 μ m.



Supplementary Figure 6. The cytokine levels in RE and TLE cerebrospinal fluid (CSF). CSF from RE and TLE patients were analyzed using Aimplex Human Multiplex Immunoassays kits according to the manufacturer's instruction. The cytokine levels were expressed as mean $\pm$ std and analyzed with a two-tailed Student t test (n=9 for RE and n=8 for TLE). *: p<0.05.

Supplementary Table 1 List of antibodies

Antibodies	Manufacturer	Catalogue No.	Dilution
anti-HSV1	abcam, UK	ab9533	1:200
anti-HSV2	abcam, UK	ab9534	1:200
anti-VZV gB	santa cruz, USA	sc-56993	1:200
anti-EBNA2	abcam, UK	ab90543	1:200
anti-HCMV	abcam, UK	ab54023	1:200
anti-HHV6	abcam, UK	ab128404	1:200
anti-HHV8	abcam, UK	ab4103	1:200
anti-Iba1	abcam, UK	ab108539	1:200
anti-CD8a	abcam, UK	ab199016	1:200
anti-GZMB	abcam, UK	ab4059	1:200
anti-Iba1 antibody	Proteintech, USA	10904-1-AP	1:200
anti-TLR3	Abcam, UK	ab62566	1:200
anti-TLR9	abcam, UK	ab52967	1:200
anti-STING	abcam, UK	ab92605	1:200
anti-IFI16	abcam, UK	ab55328	1:200
anti-TBK1	abcam, UK	ab227182	1:200
anti-IRF3	abcam, UK)	ab218160	1:200
anti-mouse IgG H&L Alexa Fluor®488	abcam, UK	ab150117	1:1000
anti-rabbit IgG H&L Alexa Fluor®594	abcam, UK	ab150080	1:1000