

Herpes simplex virus membrane proteins gE/gI and US9 act cooperatively to promote transport of capsids and glycoproteins from neuron cell bodies into initial axon segments.

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SUPPLEMENTAL DATA LEGENDS

Figure S1. GS2843. At time 0, a Married particle starts from a position 6 μm from left and moves to middle of the frame before stalling, travelling $\approx 50 \mu\text{m}$ in 42 seconds. A second Married particle begins from left side at 1 min 2 seconds and moved across entire frame ($\approx 100 \mu\text{m}$?) over the course of 60 sec. Note that live cell imaging requires switching filters which creates a small separation of red and green signals with Married particles. A large gB vesicle comes into view at left side at 1:24 and moves, with stalling, across just over half of the field (55 μm) over the course of 34 sec.

Figure S2. GS2843. A Separate capsid appears at the left at 1 min, 22 sec and moves across most of the field, $\approx 45\text{-}50 \mu\text{m}$, over a period of 36 seconds.

Figure S3. GS2843 Δ gE. A gB vesicle at time 0 moves from the extreme left to the extreme right at 20 sec, traversing $\approx 45\text{-}50 \mu\text{m}$. A second gB puncta moves into view at 36 sec and across the entire field ($\approx 45 \mu\text{m}$) until 56 sec.

Figure S4. GS2843 Δ gE. A bright Separate capsid, at the left, at time 0, moves up and down and across and out of frame at 26 sec, a distance of $\approx 45\text{-}50 \mu\text{m}$. Several gB puncta do not move substantially.

Figure S5. GS2843 Δ US9. A bright gB puncta at the left at time zero moves across the entire field (45-50 μ m) until time 26 sec. A second gB puncta comes into view at 34 seconds and moves across the entire frame ending at 1 min 2 sec.

Figure S6. GS2843 Δ US9. A Separate capsid moves into view at 1 min 14 sec and moves out of view about 5 μ m from the right side (a distance of 40-50 μ m) at 1 min 34 sec.

Figure S7. GS2843 Δ gE Δ US9. A gB puncta moves into view at the left side at 22 seconds and moves out of view at the right side (a distance of \approx 100 μ m) at 1 min 4 sec.

Figure S8. GS2843 Δ gE Δ US9. A Separate capsid moved from the left side at time 0 across the entire field (45-50 μ m) until 36-38 sec.

Figure S9. GS2843 cell body. A Separate capsid moves from the cell body into the initial axon segment stalls then continues to move about 12 μ m with some stalling until 30 sec. At 30 sec a Married particle can be seen moving toward initial segment, stalls then moves into initial segment at 34 seconds and can be seen moving in the axon until 52 sec.

Figure S10. GS2843 Δ gE Δ US9 two cell bodies. Two neurons are shown, the one on the left is at an early stage of infection with most capsids in the nucleus and the neuron on the right is a later stage of infection with many capsids in the cytoplasm. No transport of capsids or gB was observed. Both neurons had prominent axons observed by phase contrast (not shown).