

SUPPLEMENTAL MOVIE LEGENDS

Supplemental Movie 3.1. HeLa cell rescued with WT Hec1-GFP. HeLa cells were depleted of endogenous Hec1 by siRNA and rescued with WT Hec1-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 2 hr.

Supplemental Movie 3.2. HeLa cell rescued with Hec1^{K166D}-GFP. HeLa cells were depleted of endogenous Hec1 by siRNA and rescued with Hec1^{K166D}-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.3. HeLa cell rescued with 9D Hec1-GFP. HeLa cells were depleted of endogenous Hec1 by siRNA and rescued with 9D Hec1-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.4. HeLa cell rescued with WT Nuf2-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with WT Nuf2-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 2 hr.

Supplemental Movie 3.5. HeLa cell rescued with Δ 1-142 Nuf2-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with Δ 1-142 Nuf2-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.6. HeLa cell rescued with Nuf2^{K115D}-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with Nuf2^{K115D}-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.7. HeLa cell rescued with Nuf2^{K33D}-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with Nuf2^{K33D}-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.8. HeLa cell rescued with Nuf2^{K41D}-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with Nuf2^{K41D}-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.9. HeLa cell rescued with 2D Nuf2-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with 2D Nuf2-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.10. HeLa cell rescued with 3D Nuf2-GFP. HeLa cells were depleted of endogenous Nuf2 by siRNA and rescued with 3D Nuf2-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.11. HeLa cell rescued with 9A Hec1-GFP. HeLa cells were depleted of endogenous Hec1 by siRNA and rescued with 9A Hec1-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.12. HeLa cell rescued with 9A Hec1^{K166D}-GFP. HeLa cells were depleted of endogenous Hec1 by siRNA and rescued with 9A Hec1^{K166D}-GFP. Cells were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.13. HeLa cell rescued with WT Nuf2-GFP and 9A Hec1. HeLa cells were depleted of endogenous Nuf2 and Hec1 by siRNAs targeted to each gene. Cells were rescued with WT Nuf2-GFP and 9A Hec1 and were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.14. HeLa cell rescued with Nuf2^{K115D}-GFP and WT Hec1. HeLa cells were depleted of endogenous Nuf2 and Hec1 by siRNAs targeted to each gene. Cells were rescued with Nuf2^{K115D}-GFP and WT Hec1 and were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.15. HeLa cell rescued with Nuf2^{K115D}-GFP and 9A Hec1. HeLa cells were depleted of endogenous Nuf2 and Hec1 by siRNAs targeted to each gene. Cells were rescued with Nuf2^{K115D}-GFP and 9A Hec1 and were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.16. HeLa cell rescued with 3D Nuf2-GFP and WT Hec1. HeLa cells were depleted of endogenous Nuf2 and Hec1 by siRNAs targeted to each gene. Cells were rescued with 3D Nuf2-GFP and WT Hec1 and were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.

Supplemental Movie 3.17. HeLa cell rescued with 3D Nuf2-GFP and 9A Hec1. HeLa cells were depleted of endogenous Nuf2 and Hec1 by siRNAs targeted to each gene. Cells were rescued with 3D Nuf2-GFP and 9A Hec1 and were also transfected with mCherry-H2B to visualize chromosomes. Twenty-four hr post-transfection, cells were imaged using a 60x/1.42NA Planapochromat DIC oil immersion lens (Olympus) every 4 min for 5 hr.