FUS-CHOP Fusions

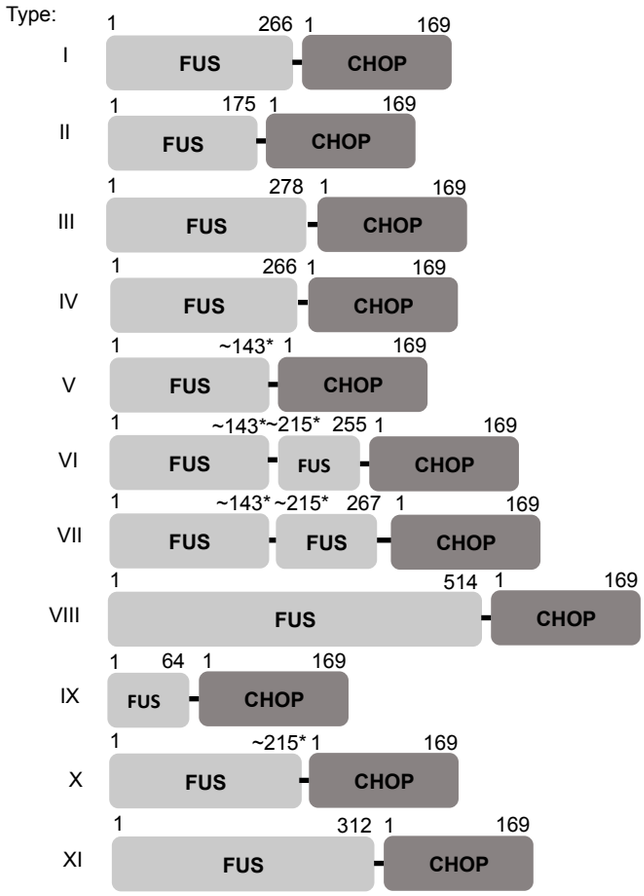


Fig. S1. Schematic of the 11 different types of FUS-CHOP fusions.
*Approximations based on reporting of FUS exon fusions/truncations but not precise codon sites.

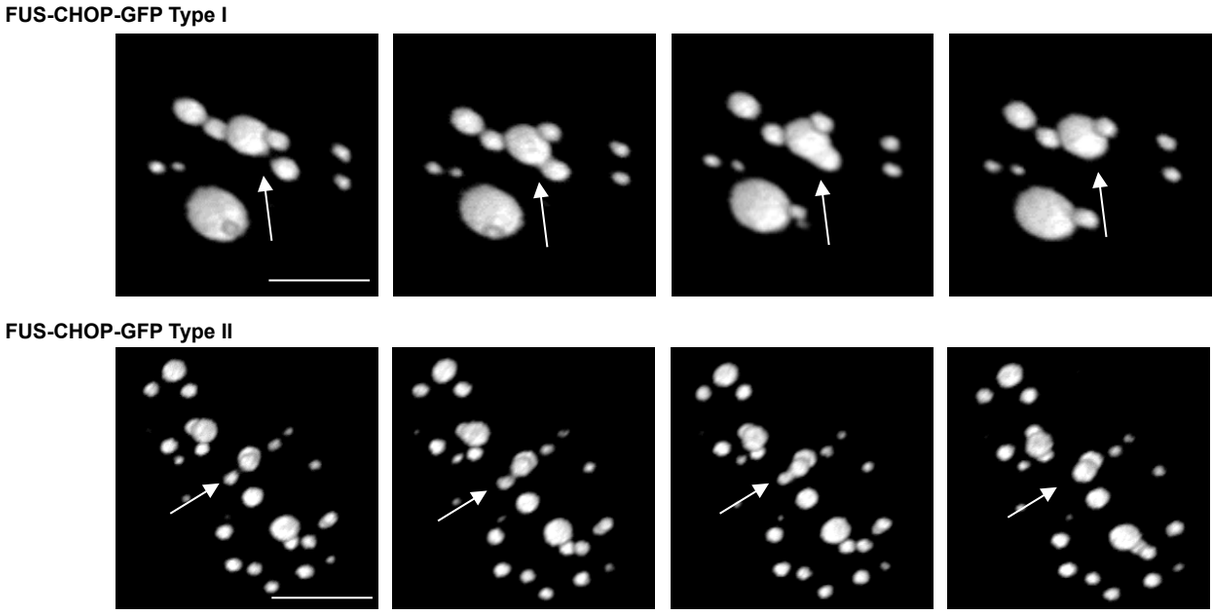


Fig. S2. Still frames from time course movies imaged by confocal microscopy of FUS-CHOP-eGFP type I and type II puncta fusing upon touching.

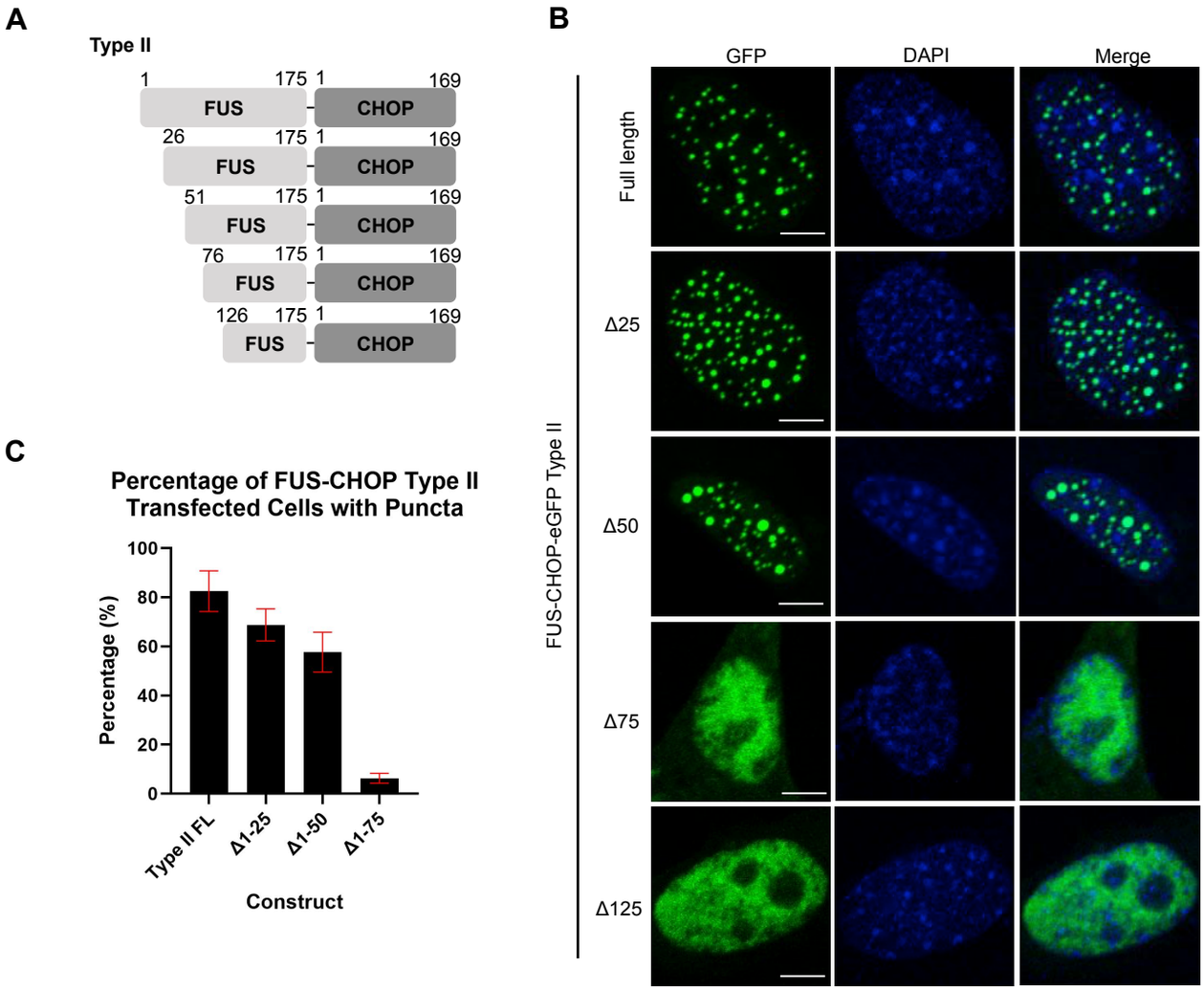


Fig. S3. A–Schematic of truncations made to FUS-CHOP-eGFP type II. B–Full-length or truncated FUS-CHOP-eGFP type II ectopically expressed in NIH 3T3 cells and imaged by confocal microscopy. Scale bar represents 5 µm. Representative data from three experimental replicates. C– Quantification of the percentage of transfected cells with nuclear puncta. Error bars represent the mean with 95% c.i. of measurements from three experimental replicates.

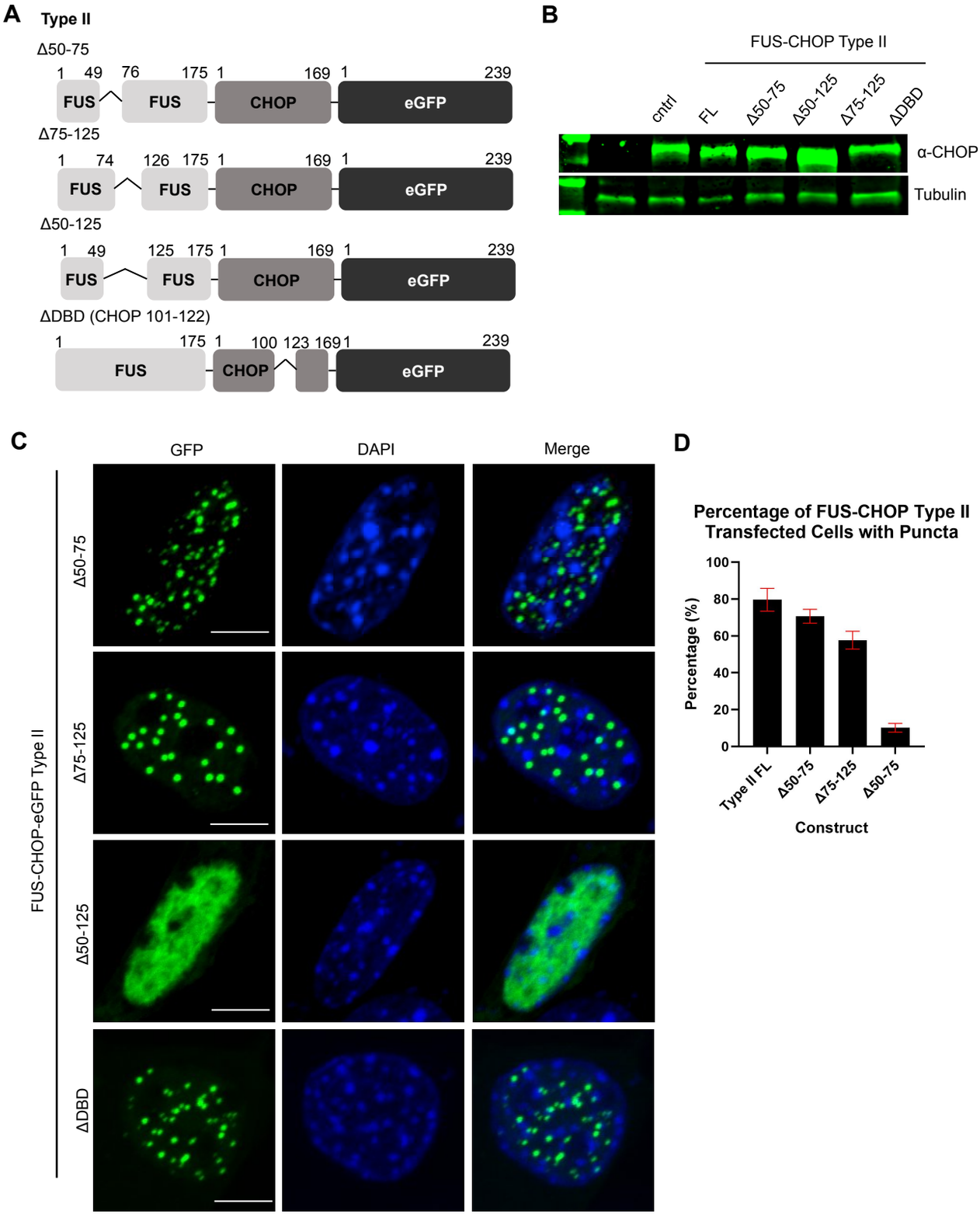
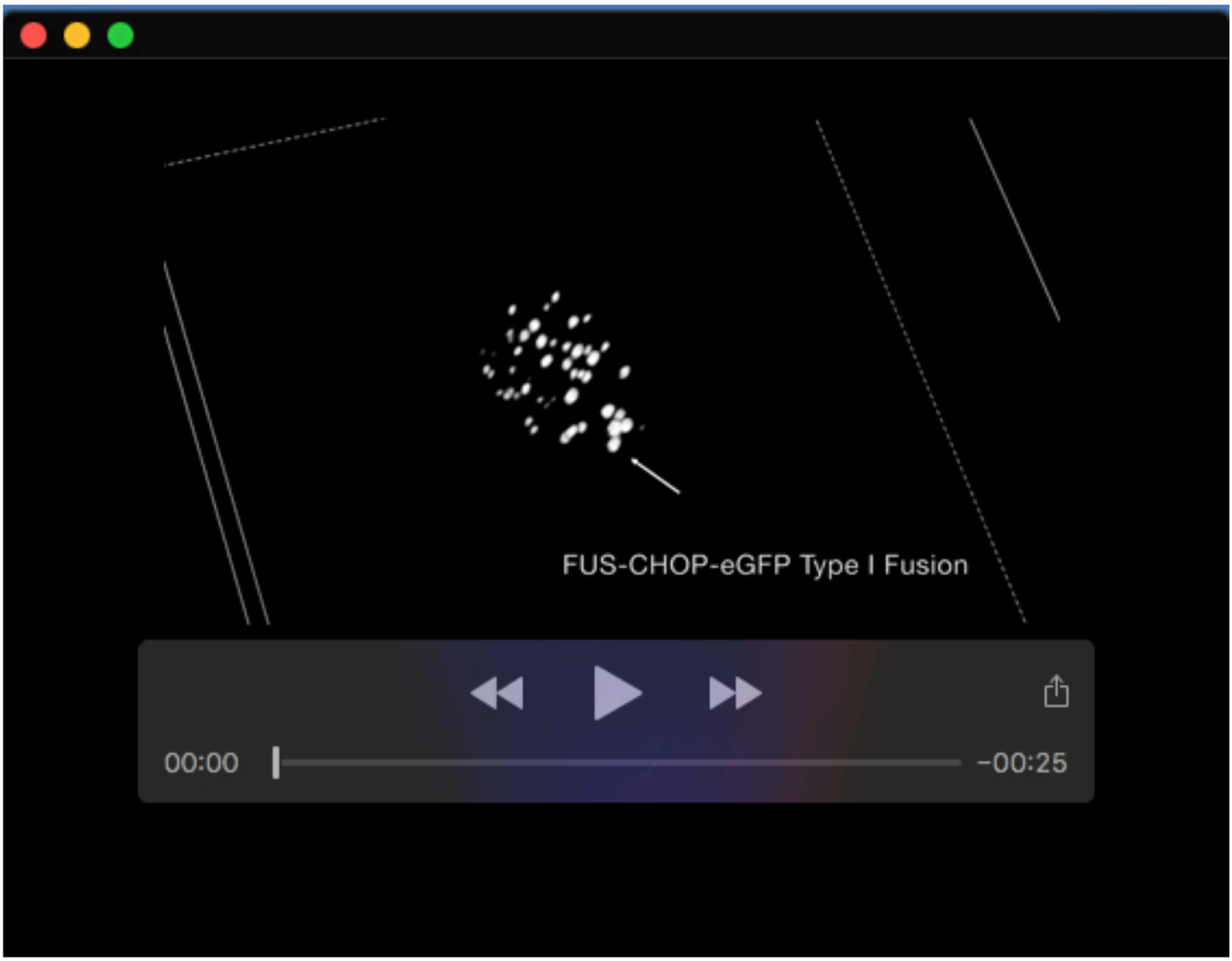


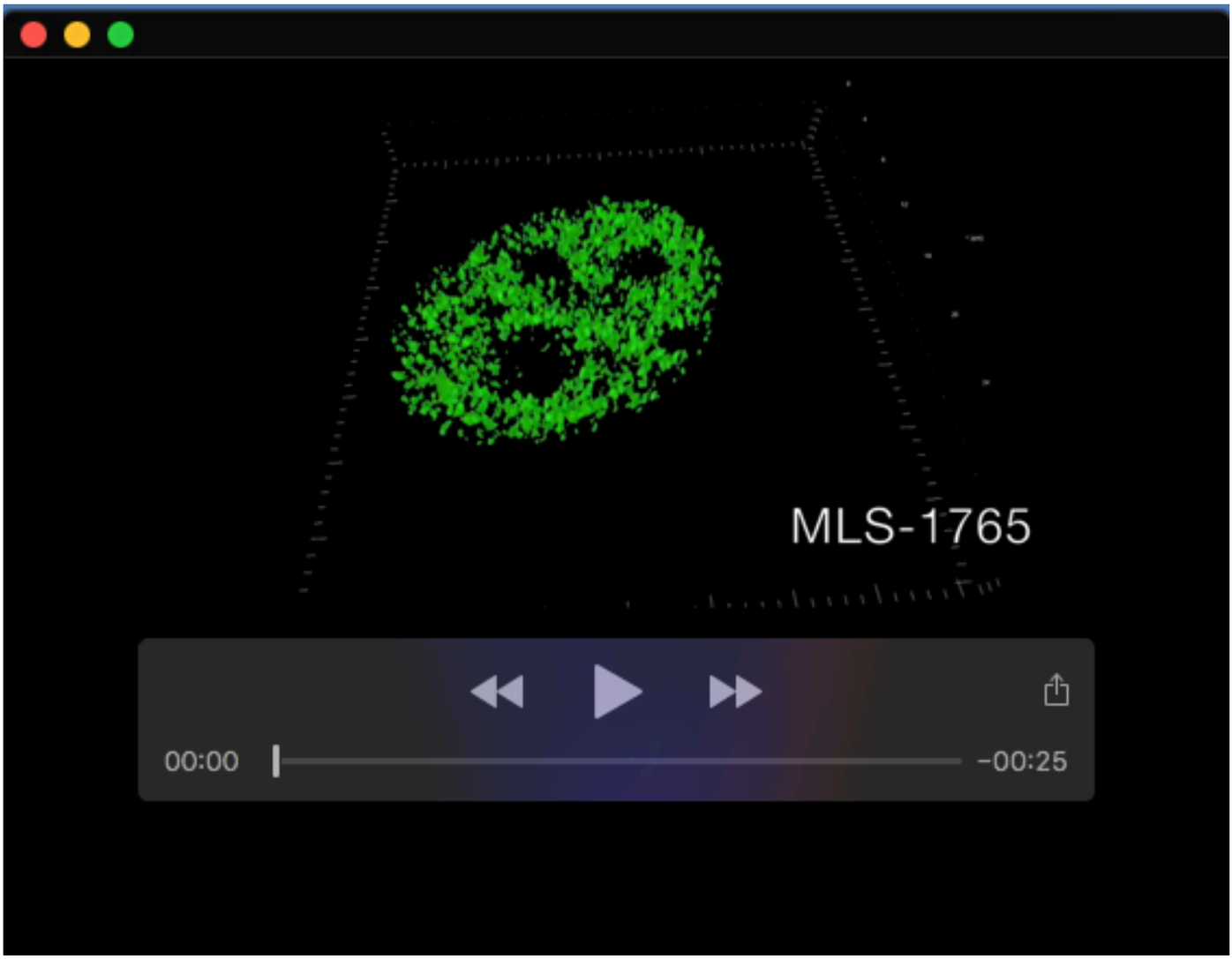
Fig. S4. A–Schematic of FUS-CHOP-eGFP type II internal truncations. B–NIH 3T3 cells transfected with full-length (FL) or truncated (Δ 50-75, Δ75-125, Δ50-125, or ΔDBD) FUS-CHOP-eGFP type II. Cell lysates were analyzed by Western Blot and probed with anti-CHOP and anti-tubulin antibodies. C– Confocal images of internally truncated FUS-CHOP-eGFP nuclear puncta type I or type II. Scale bar represents 5 μm. D- Percentage of transfected cells with nuclear puncta were quantified for each FUSCHOP-eGFP construct. Error bars represent the mean with 95% c.i. of measurements from three experimental replicates.

Table S1. Table denoting the number of tyrosine motifs removed in the FUS prion-like domain portion of FUS-CHOP truncations and internal deletions.

Construct	# of FUS PrLD tyrosine motifs removed
FUS-CHOP Δ25	3
FUS-CHOP Δ50	7
FUS-CHOP Δ75	11
FUS-CHOP Δ125	18
FUS-CHOP Δ50-75	5
FUS-CHOP Δ75-125	8
FUS-CHOP Δ50-125	11



Movie 1. FUS-CHOP-eGFP puncta have liquid-like characteristics and undergo fusion in the nucleus.



Movie 2. FUS-CHOP is localized to small nuclear puncta in Myxoid Liposarcoma cell lines.