Supplemental Movie Legends:

Supplemental Movie S1: Time-lapse imaging of MLL_N-GFP. U2OS cells stably expressing MLL_N-GFP were observed in mitosis. The MLL_N-GFP signals from spindle, mitotic centrosomes and midbody were acquired at 1 frame per minute. Movie was processed using Fiji-Imge J (30 frames/ sec).

Supplemental Movie S2: Nucleolar localization of MLL_N-GFP is shown. Time-lapse imaging of MLL_N -GFP and B23 DsRed transfected interphase cells were acquired at 1 frame per minute. The movie was processed using Fiji-ImgeJ software (30 frames/ sec).