



**Supplementary Data Set 1: Raw data. (a)** Raw-scan of Coomassie-stained gel from figure 2e. **(b)** Raw-scan of the Coomassie-stained gel from figure 3a, where lane 6 is spliced with the first two lanes. **(c)** Uncropped raw-images from figure 2g. Bottom membrane part was re-probed with  $\alpha$ -actin and separately exposed. **(d)** From left to right, uncropped raw-images of the individual exposures for  $\alpha$ -XRN2,  $\alpha$ -FLAG and marker is shown. These images correspond to figure 3d. **(e)** From left to right, uncropped raw-images of the individual exposures for  $\alpha$ -XRN2 (input, IP),  $\alpha$ -HA and marker is shown. These images correspond to figure 3b. Note that membranes in panels (c)-(e) were cut into upper and lower halves prior to antibody incubation but reassembled for exposure together.