9	
a	
-	

PABP expression in the DRG					
Species	Gene	FPKM <sup>1</sup>			

Human	PAPC1	124
Human	PAPC4	29
Human	PAPC3	0.03
Mouse	PAPC1	20
Mouse	PAPC4	3.5
Mouse	PAPC3	0.01

<sup>1</sup>Fragments per kilobase mapped (FPKM) normalized to the expression level of the upper quartile

## b



**Supplementary figure 1.** Expression and immunoreactivity of PABP4 in the DRG. (a) Expression of PABP isoforms in DRG of mouse and humans based on high-throughput sequencing. (b) PABP4, the second most abundant isoform in the DRG, fails to show a clear immunoreactivity in the DRG.



**Supplementary figure 2.** Time course showing the cellular uptake of SPOT-ONs. Cy-3 labeled Poly(A) SPOT-ONs are stable, efficiently taken up and distributed throughout the U2OS cells. Time course of quantification is shown in figure 2g.



**Supplementary figure 3.** Overexpression of PABP confirmed by immunoblot. Antibodies to PABP, GAPDH, and Myc are arranged from Top to bottom. Three concentrations of vector (0.5, 1, and 2  $\mu$ g) were transfected as before and expressed for 48 hours. Recombinant PABP was detected with a myc epitope tag.



**Supplementary figure 4.** Full blots related to figure 2c and supplementary figure 3.