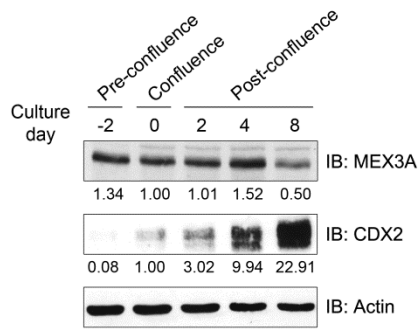
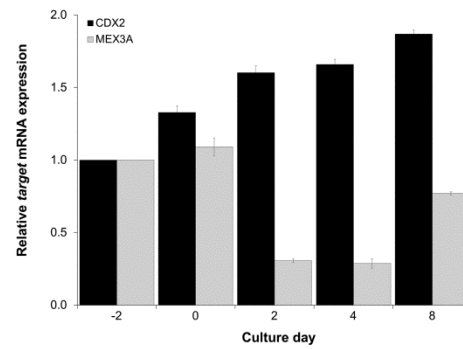


**Supplementary Figure S1.** Subcellular localization of MEX3A in P bodies **(A)** Immunofluorescence of MEX3A stably transfected AGS cells for myc-tag and for endogenous DCP1A and EDC4 proteins. **(B)** Immunofluorescence of MEX3A stably transfected Caco-2 cells for myc-tag and endogenous DCP1A and EDC4 proteins. White arrow-heads point to different sites of co-localization (original magnification, x630; scale bars 20  $\mu$ m).

**A****B**

**Supplementary Figure S2.** Study of the expression profile of endogenous MEX3A in Caco-2 cells. **(A)** Western blot of MEX3A and CDX2 expression during Caco-2 differentiation. The time-point in which confluence is achieved is referred to as day 0 (culture day 6). **(B)** qPCR of *MEX3A* and *CDX2* mRNA expression during the same time-points. Values for *CDX2* and *MEX3A* at day -2 were referred to as 1.

***Pan troglodytes CDX2*** - One predicted MRE in the 3'UTR

bp	Sequence
1991	AGAGTTTTTA

***Mus musculus Cdx2*** - Two predicted MREs in the CDS

bp	Sequence
873	GGAGTTTCACTTTA
1171	GGAGGGGTTTTA

***Rattus norvegicus Cdx2*** - Three predicted MREs, one in the CDS and two in the 3'UTR

bp	Sequence
1010	GGAGGGGTTTTA
1228	TTAGATTTTTTTTTTA
2027	GGAGCTTTA

***Danio rerio cdx1a*** - One predicted MRE in the 3'UTR

bp	Sequence
1176	TGAGTTTA

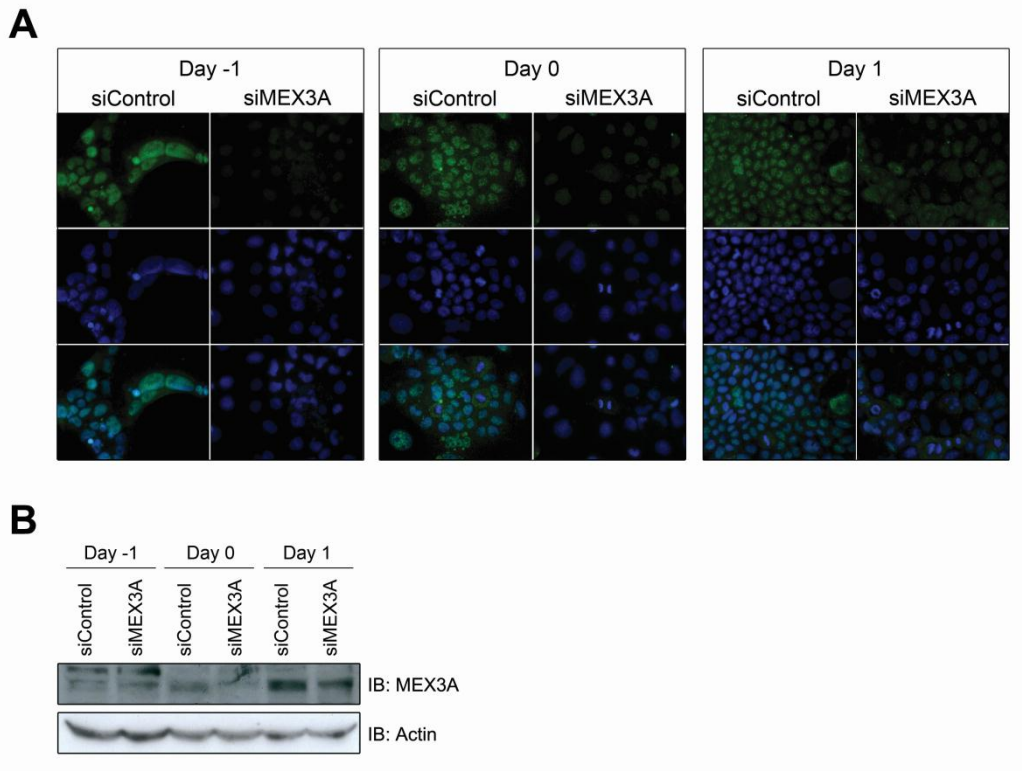
***Xenopus laevis cdx2*** - Seven predicted MREs in the 3'UTR

bp	Sequence
1269	ATAGACTTTTA
1640	TTAGATCCCTTCTA
1860	GTAGCATTTTA
2251	GTAGGCAGCCTTTA
2355	GGAGACGTTTA
2488	TGAGTGTTTTATA
2546	GGAGGATATATTTA

***Drosophila melanogaster cad*** - Four predicted MREs in the 3'UTR

bp	Sequence
2235	ATAGCCGCATATATA
2251	AGAGTTTTAACGTTTA
2298	GTAGTTAATATA
2469	ATAGCTATTTA

**Supplementary Figure S3.** Bioinformatics search for MREs in *CDX2* homologues of several species. Different MRE sequences located in the coding sequence (CDS) or 3'UTR of the transcripts are shown.



**Supplementary Figure S4.** Inhibition of endogenous MEX3A in Caco-2 cells. **(A)** Immunofluorescence for endogenous MEX3A at different time-points, upon inhibition with specific siRNAs for 24h (original magnification, x400; scale bar 20  $\mu$ m). **(B)** Corresponding western blot analysis of MEX3A downregulation.