

Table S3. Related to STAR METHODS. List of dual color reporters used to evaluate OT organelles in this study.

Name	Plasmid	Associated Figures	Description
dual color ms2 reporter	pBI_NLS::mCherry ^{190TAG} ::6xHis::2xms2_NLS::FLAG::EGFP ^{39TAG} ::6xHis	2, 3, S1, S6	The ms2 reporter is used to evaluate the selectivity and efficiency of MCP-based OT organelle in comparison to cytoplasmic translation. It was used for FFC analysis.
dual color boxB reporter	pBI_NLS::mCherry ^{190TAG} ::6xHis::4xboxB_NLS::FLAG::EGFP ^{39TAG} ::6xHis	2, 3, S1, S6	The boxB reporter is used to evaluate the selectivity and efficiency of λ_{N22} -based OT organelle in comparison to cytoplasmic translation. It was used for FFC analysis.
double-recruitment reporter	pBI_NLS::mCherry ^{190TAG} ::6xHis::2xms2_NLS::FLAG::EGFP ^{39TAG} ::6xHis::4xboxB	5, S3, S7	The double-recruitment reporter is used to evaluate if an OT organelle system selectively translates ms2- or boxB-tagged mRNAs. This is for example used to compare the combined OT organelles and asses which organelle is more active in presence of a specific ncAA. It was used for FFC analysis and imaging
doubly tagged imaging reporter	pBI_H2B::mCherry ^{190TAG} ::6xHis::2xms2_Nup153::EGFP ^{149TAG} ::6xHis::4xboxB	2, 5, 6	The doubly tagged imaging reporter is used to evaluate if an OT organelle system selectively translates ms2- or boxB-tagged mRNAs. It is analogous to the double-recruitment reporter however it was exclusively used for fluorescence microscopy. If an organelle translates ms2-tagged mRNAs red fluorescence is observed in the nucleus, if an organelle translates boxB-tagged mRNA green fluorescence can be detected at the nuclear rim.