Figures and figure supplements

Circularization restores signal recognition particle RNA functionality in *Thermoproteus* et al
Figure 3. Binding of SRP19 and SRP54 to the S-domain of the permuted SRP RNA. (A) Proteins of flow-through (F) and elution (E) fractions of DEAE-columns are separated on 15% SDS polyacrylamide gels next to a protein marker (M). SRP54 has weak affinity to the S-domain (Sd) RNA. The addition of SRP19 triggers interaction of SRP54 with Sd RNA. (B) Analysis of three independent binding assays of SRP19 and SRP54 to the different S-domain constructs (Sd: S-domain, Open: non-circularized version of the S-domain, GNAR: point-mutation in the GNAR motif, h8b: triple mutation in the helix 8b, Ctrl: control RNA of similar length). Sequences are listed in Tab. S2. Binding of the individual proteins is indicated as Sd*.

DOI: http://dx.doi.org/10.7554/eLife.11623.006
Figure 2. Identification of a permuted circular SRP RNA. (A) Illumina Hiseq2000 example reads are mapped to the T. tenax reference genome (top sequence) and indicate the transcription start site (TSS) of SRP RNA precursors or contain the circularization junction. Parts of these reads (boxed) map to the distant SRP RNA terminus and highlight ligated 5' and 3' ends in helix h8b. (B) Sequence coverage at the intergenic region between the genes TTX_0683 and TTX_0684. Reads were obtained for the permuted SRP RNA and an adjacent C/D box sRNA (>10000 reads). (C) Northern Blot analyses verify the presence of the permuted RNA. Three signals were identified that might represent different stable structures of SRP RNA molecule. 15 ng of linear or circularized SRP RNA transcripts serve as size-markers and verify the altered running behavior of different SRP RNA forms.

DOI: http://dx.doi.org/10.7554/eLife.11623.005
Figure 4. Monitoring treatment effects of VEGF inhibition on glioma vessels using MR-UM. Experimental outline (a). Single plane, T2*-w images before (week 2) and after VEGF or isotype control treatment (week 3). Treatment was initiated 2 weeks after tumor implantation when a solid tumor component had formed as confirmed on MRI. Correlative UM is shown of the same animal (b). Permeability (K_trans) maps, calculated from DCE MRI are depicted in (c). Quantification of the vascularized area on T2*-w images (d). Quantification of the blood-brain barrier disruption (BBB-D) on DCE images (e). Correlation of BBB-D and the vascularized area (f). Quantification of vessel diameter and vessel density on UM images (g,h). MIP: maximum intensity projection. Scale bars are 1 mm on MR images and 500 μm on UM images.

DOI: http://dx.doi.org/10.7554/eLife.11712.018