

Literature Review



Design and application of circular RNAs with protein-sponge function

**HPLC Column, Sepax, SRT SEC-2000 PEEK, 5um, 2000 A
4.6 x 300 mm**

Part Number: [215980P-4630](#)

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University of Giessen

Schreiner, Silke, et al. "Design and application of circular RNAs with protein-sponge function." *Nucleic acids research* 48.21 (2020): 12326-12335.
<https://doi.org/10.1093/nar/gkaa1085>

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Abstract

Circular RNAs (circRNAs) are a class of noncoding RNAs, generated from pre-mRNAs by circular splicing of exons and functionally largely uncharacterized. Here we report on the design, expression, and characterization of artificial circRNAs that act as protein sponges, specifically binding and functionally inactivating hnRNP (heterogeneous nuclear ribonucleoprotein) L. HnRNP L regulates alternative splicing, depending on short CA-rich RNA elements. We demonstrate that designer hnRNP L-sponge circRNAs with CA-repeat or CA-rich sequence clusters can efficiently and specifically modulate splicing-regulatory networks in mammalian cells, including alternative splicing patterns and the cellular distribution of a splicing factor. This new strategy can in principle be applied to any RNA-binding protein, opening up new therapeutic strategies in molecular medicine.

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<https://academic.oup.com/nar/article/48/21/12326/5999895>



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Article Overview

* SRT column was used to purify the long circRNAs sample with HPLC fractionation.

Sample

Broad Sample Type	DNA/RNA/OLIGO
Sample	circRNA
Sample Notes	circRNA
Sample Prep	30 µg of RNA was heated at 80°C for 3 min and then placed on ice.

Experimental conditions

Column	SRT SEC-2000, 5µm, 4.6x300mm
Mobile Phase	RNase-free TE buffer (20 mM Tris-Cl pH 6.8, 1 mM EDTA)
Flow Rate	0.15 and 0.2 ml/min
Instrument Notes	ÄKTApurifier HPLC



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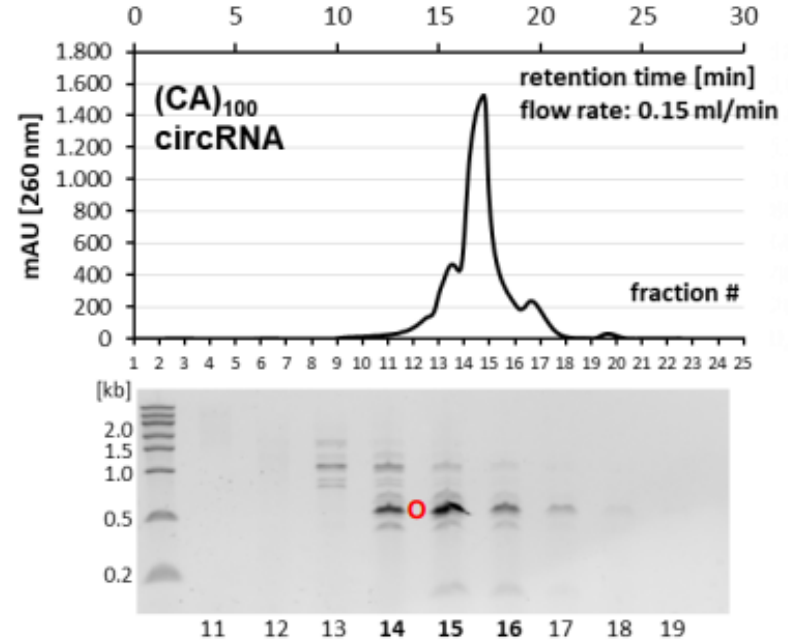
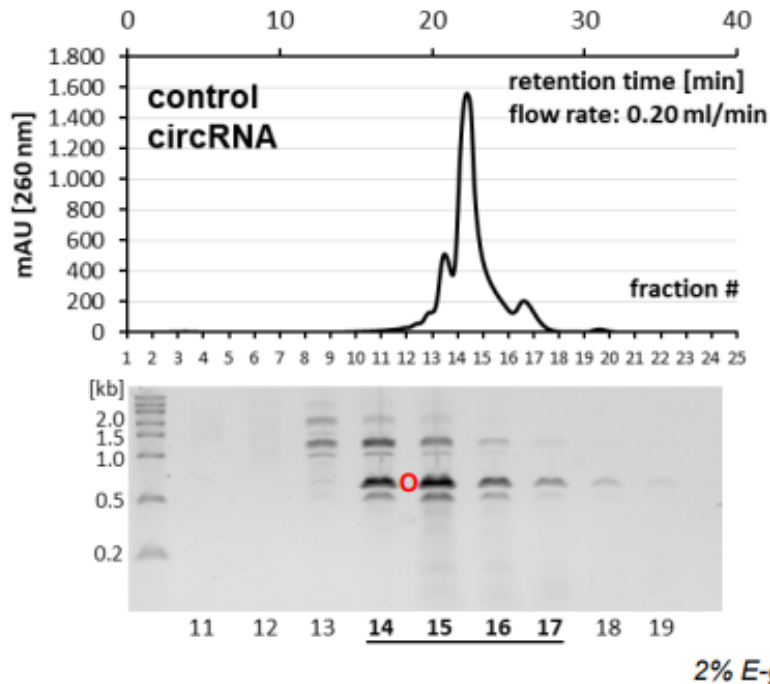
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Literature Reference

CircRNA on Sepax Analytical SEC

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Supplementary Figure S2



Summary of Sepax Column Data - SRT column was used to purify the long circRNAs sample with HPLC fractionation.

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