

# ArciTect™ crRNA

## Custom-designed CRISPR RNA for guide RNA generation in CRISPR-Cas9 genome editing

Catalog #	76010	2 nmol
	76011	10 nmol
	76012	20 nmol



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Product Description

ArciTect™ crRNA is a custom CRISPR RNA (crRNA), one of two synthetic RNA components required to make a guide RNA (gRNA) template for CRISPR-Cas9 genome editing. ArciTect™ crRNA contains a user-specified 19 - 21 base sequence complementary to the genomic location to be cleaved, and a linker sequence complementary to ArciTect™ tracrRNA (Catalog #76016), allowing fast and efficient gRNA duplex formation. ArciTect™ crRNA should be designed so that it is directly upstream of a protospacer adjacent motif (PAM) site (NGG). It contains 2'-O-methyl and phosphorothioate modifications at the first two 5' and 3' terminal residues for optimal stability and editing efficiency.

## Properties

<b>Storage:</b>	Store at -80°C. Alternatively, store at -20°C for up to 6 months.
<b>Shelf Life:</b>	Stable for 2 years from date of manufacture (MFG) on label.
<b>Format:</b>	Lyophilized

## Materials Required But Not Included

- Nuclease-free water (e.g. Catalog #79001)

## Directions for Use

The following protocol is for preparation of a 200 µM crRNA stock solution.

1. Briefly centrifuge the vial before opening.
2. Add nuclease-free water as outlined in Table 1.

**Table 1. Preparation of 200 µM\* crRNA Stock Solution**

ArciTect™ crRNA	VOLUME OF NUCLEASE-FREE WATER (µL)
2 nmol (Catalog #76010)	10
10 nmol (Catalog #76011)	50
20 nmol (Catalog #76012)	100

\*200 µM is equal to 200 pmol/µL

3. Mix thoroughly. If not used immediately, aliquot and store at -80°C for up to 6 months. After thawing the aliquots, use immediately. Do not re-freeze.

For complete instructions on CRISPR-Cas9 genome editing, refer to the Technical Bulletin: Genome Editing of Human Pluripotent Stem Cells (Document #27084), available at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.

## Related Products

For related products, including other genome editing tools, specialized cell culture and storage media, supplements, antibodies, cytokines, and small molecules, visit [www.stemcell.com](http://www.stemcell.com) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

- Gundry MC et al. (2016) Highly efficient genome editing of murine and human hematopoietic progenitor cells by CRISPR/Cas9. *Cell Rep* 17(5): 1453–61.
- Hultquist JF et al. (2016) A Cas9 ribonucleoprotein platform for functional genetic studies of HIV-host interactions in primary human T cells. *Cell Rep* 17(5): 1438–52.
- Kim S et al. (2014) Highly efficient RNA-guided genome editing in human cells via delivery of purified Cas9 ribonucleoproteins. *Genome Res* 24(6): 1012–9.
- Liang X et al. (2015) Rapid and highly efficient mammalian cell engineering via Cas9 protein transfection. *J Biotechnol* 208: 44–53.
- Ran FA et al. (2013) Double nicking by RNA-guided CRISPR Cas9 for enhanced genome editing specificity. *Cell* 154(6): 1380–9.
- Rupp LJ et al. (2017) CRISPR/Cas9-mediated PD-1 disruption enhances anti-tumor efficacy of human chimeric antigen receptor T cells. *Sci Rep* 7(1): 737.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2018 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and ArciTect are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. The purchase of the ArciTect™ products conveys to the purchaser the limited, non-transferable right to use, in accordance with all applicable laws and regulations, the ArciTect™ products and any related material solely for research purposes only, not for any clinical, human, agricultural, veterinary, livestock, or commercial purpose, with no warranty (express or implied) from the owners or assignees of the Patents or STEMCELL Technologies each of whom expressly disclaim any warranty regarding results obtained through the use of the ArciTect™ products, and without any exception the owners or assignees of the Patents or STEMCELL Technologies, or as applicable a director, trustee, officer, employee, agent, faculty, official investigator or student thereof, will not suffer or be exposed to any liability, damages, loss, or expense of any kind whatsoever arising from or related to the use of the ArciTect™ products by a purchaser of same. Distribution of ArciTect™ products by STEMCELL Technologies is covered under at least US 8,697,359, US 8,771,945, US 8,795,965, US 8,865,406, US 8,871,445, US 8,889,356, US 8,889,418, US 8,895,308, US 8,906,616 and foreign equivalents ("Patents"). While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.