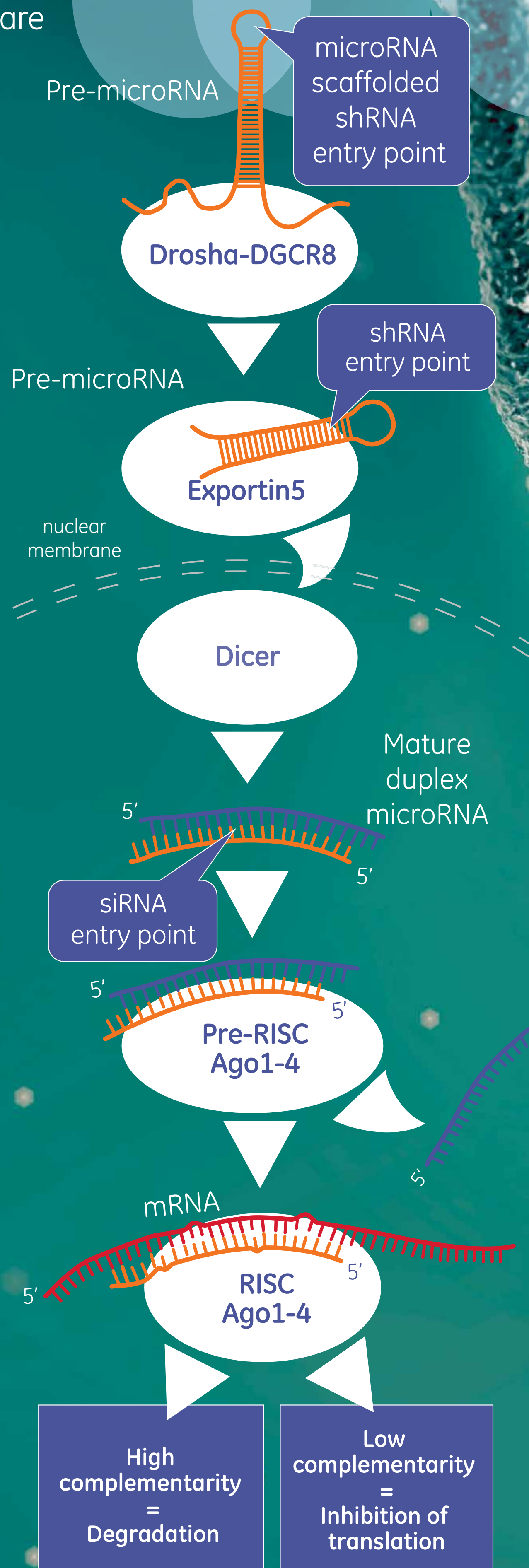




Dharmacon™
part of GE Healthcare

Get to know RNAi

Since its discovery, RNAi has rapidly become an essential tool for interrogating gene function. Over the last decade, Dharmacon's toolbox has expanded to include synthetic siRNA chemically-modified for high performance and specificity, shRNAs driven from your choice of promoter or the ability to switch expression on and off, long non-coding RNA (lncRNA) tools for detection and knockdown, and custom RNA synthesis with an astonishing number of possible chemical modifications. We are proud to support your success!



Test your knowledge

1. What *C. elegans* gene was initially targeted in the famous 1998 Fire & Mello paper?

- A. cep-1 (tp53 homolog)
- B. unc-22 (myofilament)
- C. gfp-9 (green fluorescent protein)
- D. act-5 (actin)

2. The Argonaute protein is a component of RISC. What is an "Argonaut"?

- A. sailors on the Argo
- B. a small, friendly octopus
- C. famous gold mine in California, USA
- D. all of the above

3. The term RNAi was first used when the process was observed in

- A. *D. melanogaster* (fruit fly)
- B. *C. elegans* (worm)
- C. *Xenopus* (froggy)
- D. Yeast (you know, yeast)

4. In 1986, as plant scientists were trying to intensify flower color, an unexpected observation was made that was explained later as an RNAi mechanism. In what type of flower were these experiments carried out?

- A. Geranium
- B. Tulips
- C. Petunia
- D. Pansy

Answers: 1:B, 2:D, 3:B, 4:C

Did you know?

dicerna
"digestible" in Malay or Indonesian

Drosha
"banner" or "Flag" in Georgian

RISC
"hazard" in Romanian

Cosuppression in petunias
1990

RISC and Dicer activities identified
2001

Dharmacon delivers the first human whole-genome siRNA library
2005

Improved proprietary microRNA scaffold is used for SMARTvector™ shMIMICs Lentiviral miRNA
2010

Industry-leading designs produce Lincode™ siRNAs and libraries against long non-coding RNAs.
2013

Know your RNAi history

1998
Fire and Mello show the effectiveness of dsRNA...

2001
...and in mammalian cells

2002
First research tools for RNAi commercially available

2008
Dharmacon introduces a revolutionary high-performance design for miRIDIAN™ microRNA Hairpin Inhibitors

2012
Decode™ – Second generation of lentiviral shRNA screening pools optimized for NGS

2013
Choice of multiple promoters and red or green markers highlight SMARTchoice™ shMIMIC Lentiviral miRNA.