Universal miRNA Cloning Linker

1-800-632-7799
info@neb.com
www.neb.com

S1315S 0041310 16101

S1315S

5 µg **Lot: 0041310**

Store at –20°C **Exp: 10/16**

Sequence:

5´ rAppCTGTAGGCACCATCAAT–NH_2 3´

Description: This 5´ adenylated, 3´ blocked oligodeoxyribonucleotide can be used for cloning short RNAs according to the procedure of Bartel (1). RNA ligase recognizes the "activated" adenylated oligo and covalently ligates its 5´ end to the 3´ OH of a second single stranded sequence in the absence of ATP. In a mixture of nucleic acids use of the 5´ adenylated, 3´ blocked oligo with RNA ligase (w/o ATP) results in ligation of the target oligo only.

Applications:

- small RNA cloning (1,2)
- miRNA library construction (1,2)

Quality Assurance: This linker was tested for reactivity with T4 RNA Ligase (1,2). Its identity was confirmed by MALDI-TOF Mass Spectrometry.

Linker/RNA Ligation Protocol:
The Universal miRNA cloning linker has a 3´ blocking group (amine) to prevent self ligation, circularization and ligation to RNA at the 5´ end. It also contains the BanI restriction site compatible with the miRNA cloning protocol used by Bartel (1).

For ligation, resuspend the lyophilized oligonucleotide in RNAse-free water to 100 µM stock concentration. (A resuspension volume of 8.6 µl will give a 0.58 µg/µl or 100 µM stock solution). Ligations are carried out with T4 RNA Ligase I in the absence of ATP. Approximately 1 µg is typically used per reaction. See reference 1 for a detailed protocol.

References:

1. Lau et al., (2001) *Science*, 294, 858-862.
2. Pfeffer, S., Lagos-Quintana, M. and Tuschl, T. (2005). In F.M. Ausebel, R. Brent, R.E. Kingston, D.D. More, J.G. Seidman, J.A. Smith and K. Struhl (Eds.), *Current Protocols in Molecular Biology* (p. 26.4.14). New York: John Wiley & Sons, Inc.

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