

Universal miRNA Cloning Linker



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S1315S 006150318031

S1315S

5 µg Lot: 0061503

Store at -20°C Exp: 3/18

Sequence:

5' rAppCTGTAGGCACCATCAAT-NH₂ 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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