Electronic Supplementary Material (ESI) for Environmental Science: Nano. This journal is © The Royal Society of Chemistry 2023

Supplementary Material

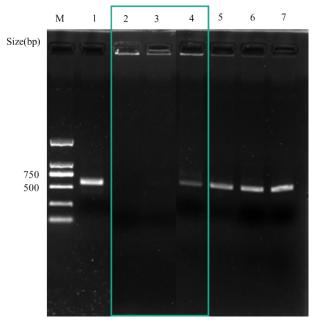


Fig. 1. Binding of dsRNA to chitosan solutions at different concentrations

 $25 \mu g$ dsRNA was combined with 100 μL CS. M: DNA Marker; 1: dsRNA; 2-7: The mass ratios of the dsRNA and CS were: 1.25:1, 12.5:1, 25:1, 50:1, 100:1, and 125:1. The dsRNA band was approximately 600 bp.

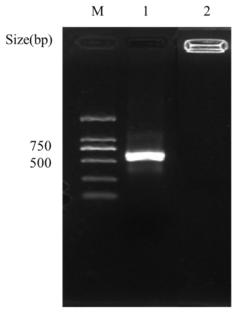


Fig. 2. Combination of dsRNA and SPc

1 µg of dsRNA was combined with SPc in a mass ratio of 1:1. M: DNA Marker; 1: dsRNA; 2: dsRNA/SPc. The dsRNA band was approximately 600 bp.

Table 1 Sequences producing significant alignments

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Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Accession				
Carposina sasakii	72.3	72.3	13%	6e-08	90.14%	CP053149.1				
Pheosia tremula	70.3	70.3	9%	2e-07	94.00%	HG995397.1				

Pheosia gnoma	70.3	70.3	9%	2e-07	94.00%	FR989894.1
Marasmarcha lunaedactyla	60.3	60.3	6%	2e-04	97.14%	OV281346.1
Blastobasis adustella	60.3	60.3	5%	2e-04	100.00%	OU026116.1
Blastobasis lacticolella	60.3	60.3	5%	2e-04	100.00%	LR990043.1

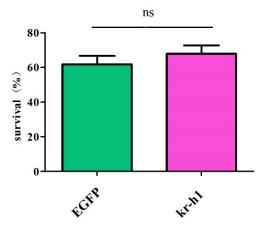


Fig. 3. Effects of foliar spraying dsTakr-h1 on the survival rate of N. tenuis