

## PRIMER PICKING RESULTS FOR *Puccinia\_recondita*\_consensus\_consensus\_group\_2

```
Template masking not selected
No mispriming library specified
No internal oligo mishyb library specified
Using 1-based sequence positions
```

OLIGO	<u>start</u>	<u>len</u>	<u>tm</u>	<u>gc%</u>	<u>any th</u>	<u>3' th</u>	<u>hairpin</u>	<u>seq</u>
LEFT PRIMER	54	20	59.16	55.00	21.32	0.00	0.00	tccatggccaggatcttcag
RIGHT PRIMER	229	21	57.63	42.86	26.27	20.84	0.00	tttgattccacaagcttgctg
INTERNAL OLIGO	92	20	58.15	50.00	0.00	0.00	44.20	ggttcacaccatgagctact

```
SEQUENCE SIZE: 478
INCLUDED REGION SIZE: 478
```

PRODUCT SIZE: 176, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 0.00

1 atgcatacaNaaatccttgtagcccttgctctttaccgcctcttctgtccctttccatgg  
>>>>>>

61 ccaggatcttcagtcaaaatctctgaactatgggttcacaccatgagctactagatcttgt  
>>>>>>>>>>> ^^^^^^^^^^^^^^^^^^^

121 ggaaagNttagtactaactaagactataatttgctatNctcctttgattacaaaggaatta

181 gNgtttcttgtaaaNtatgattataNgcagcaagc ttgtggaatcaa tgtcaNtaatg

241 tgagtgttgattctctcgttcaactggaggaacaccttgagaccgccctttctgtaacta

301 gagccaagaaggtNagttgattctataacgtNtactgttttctgaatttggtttgctgag

361 aacaactttgctgcttttNtttgttNttgttacagacggaactaatgNtgaagcttgttg

421 agaaccttaaNgaaaaNgttagatatttgatNccaaatttagNgcatNagNtatNttc

```
KEYS (in order of precedence):
>>>>> left primer
<<<<< right primer
^^^^^ internal oligo
```

ADDITIONAL OLIGOS

start	len	tm	gc%	any th	3' th	hairpin	seq
1	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
2	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
3	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
4	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
5	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
6	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
7	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
8	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
9	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
10	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
11	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
12	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
13	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
14	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
15	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
16	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
17	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
18	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
19	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
20	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
21	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
22	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
23	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
24	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
25	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
26	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
27	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
28	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
29	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
30	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
31	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
32	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
33	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
34	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
35	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
36	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
37	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
38	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
39	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
40	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
41	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
42	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
43	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
44	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
45	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
46	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
47	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
48	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
49	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
50	10	57.5	40	0	0	0	5'-GCTGCTGCTGCT-3'
51							

1 LEFT PRIMER 209 21 57.63 42.86 26.55 0.00 0.00 cagcaagcttggtggaatcaaa  
RIGHT PRIMER 374 20 58.24 50.00 0.00 0.00 0.00 gcagcaaagttgttctcagc  
INTERNAL OLIGO 265 20 59.88 55.00 0.00 0.00 41.35 tggaggaacaccttgagacc  
PRODUCT SIZE: 166, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 0.00

2 LEFT PRIMER 38 20 59.31 55.00 0.00 0.00 0.00 gcctcttctgtccctttcca  
RIGHT PRIMER 234 23 58.13 39.13 24.84 24.84 0.00 tgacatttgattccacaagcttg  
INTERNAL OLIGO 58 20 59.58 50.00 0.00 0.00 0.00 tggccaggatcttcagtcaa  
PRODUCT SIZE: 197, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 0.00

3 LEFT PRIMER 211 22 58.34 40.91 26.55 0.00 0.00 gcaagcttggtggaatcaaagt  
RIGHT PRIMER 371 22 59.14 45.45 0.00 0.00 0.00 gcaaagttgttctcagcaaacc  
INTERNAL OLIGO 265 20 59.88 55.00 0.00 0.00 41.35 tggaggaacaccttgagacc  
PRODUCT SIZE: 161, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 0.00

Statistics

	con	too	in	in	not		no	tm	tm	high	high	high		high	
	sid	many	tar	excl	ok	bad	GC	too	too	any_th	3'_th	hair-	poly	end	
	ered	Ns	get	reg	reg	GC%	clamp	low	high	compl	compl	pin	X	stab	ok
Left	1219	160	0	0	0	69	0	550	96	0	0	46	0	0	298
Right	844	237	0	0	0	21	0	353	44	0	0	4	0	0	185
Intl	2233	295	0	0	0	0	0	696	467	0	0	3	0	0	772

Pair Stats:  
considered 41466, unacceptable product size 41462, primer in pair overlaps a primer in a better pair 4515, ok 4  
libprimer3 release 2.4.0

(primer3\_results.cgi release 4.1.0)