

PRIMER PICKING RESULTS FOR *Puccinia\_recondita*\_elongation factor 1 alpha\_elongation factor 1\_consensus\_group\_4

	<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>
OLIGO								
LEFT PRIMER	25	20	59.24	50.00	0.00	0.00	0.00	tgtctccgttgaagccagaa
RIGHT PRIMER	206	20	58.11	45.00	0.00	0.00	0.00	tgcttgcgttcacattaggt
INTERNAL OLIGO	138	20	59.74	50.00	0.00	0.00	36.37	catttggccgtgtccatctt
SEQUENCE SIZE: 312								
INCLUDED REGION SIZE: 312								

PRODUCT SIZE: 182, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 1.53

61 caaccttggggttaaatccgactttctttatNaagttggtcgtctccttgatNatttcaa

181 ttNgacacctaattgtgaacgcaagcAntgcatgtttcttggttggaccatcctttgaaat  
 <<<<<<<<<<<<<<<<<<

241 acctgcctcNaactcaccggtaccggccgcgatgatgagaatggcacagtcagcttgaga

301 ggttccNgtaat

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

## ADDITIONAL OLIGOS

start	len	tm	gc%	any th	3' th	hairpin	seq
136	18	60.28	61.11	0.00	0.00	0.00	cccatttggccgtgtcca
295	20	59.31	50.00	0.00	0.00	0.00	agctgactgtgccatttctca
187	20	59.02	45.00	0.00	0.00	45.62	acctaagtgaacgcgaagca

, PAIR ANY\_TH COMPL: 0.00, PAIR 3'\_TH COMPL: 0.00

2 LEFT PRIMER	64	20	57.20	50.00	0.00	0.00	0.00	ccttgggggttaaattccgact
---------------	----	----	-------	-------	------	------	------	------------------------

RIGHT PRIMER	247	22	58.63	45.45	0.00	0.00	0.00	ggcagggtattttcaaaggatggt
INTERNAL OLIGO	138	20	59.74	50.00	0.00	0.00	36.37	catttggccgtgtccatctt

PRODUCT SIZE: 184, 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	544	88	0	0	0	32	0	213	42	0	0	80	0	0	89
Right	503	101	0	0	0	26	0	178	81	0	0	31	0	0	86
Intl	1502	187	0	0	0	1	0	367	425	0	0	9	0	0	513

Pair Stats:

considered 5190, unacceptable product size 5185, primer in pair overlaps a primer in a better pair 2431, ok 5

libprimer3 release 2.4.0

(primer3\_results.cgi release 4.1.0)