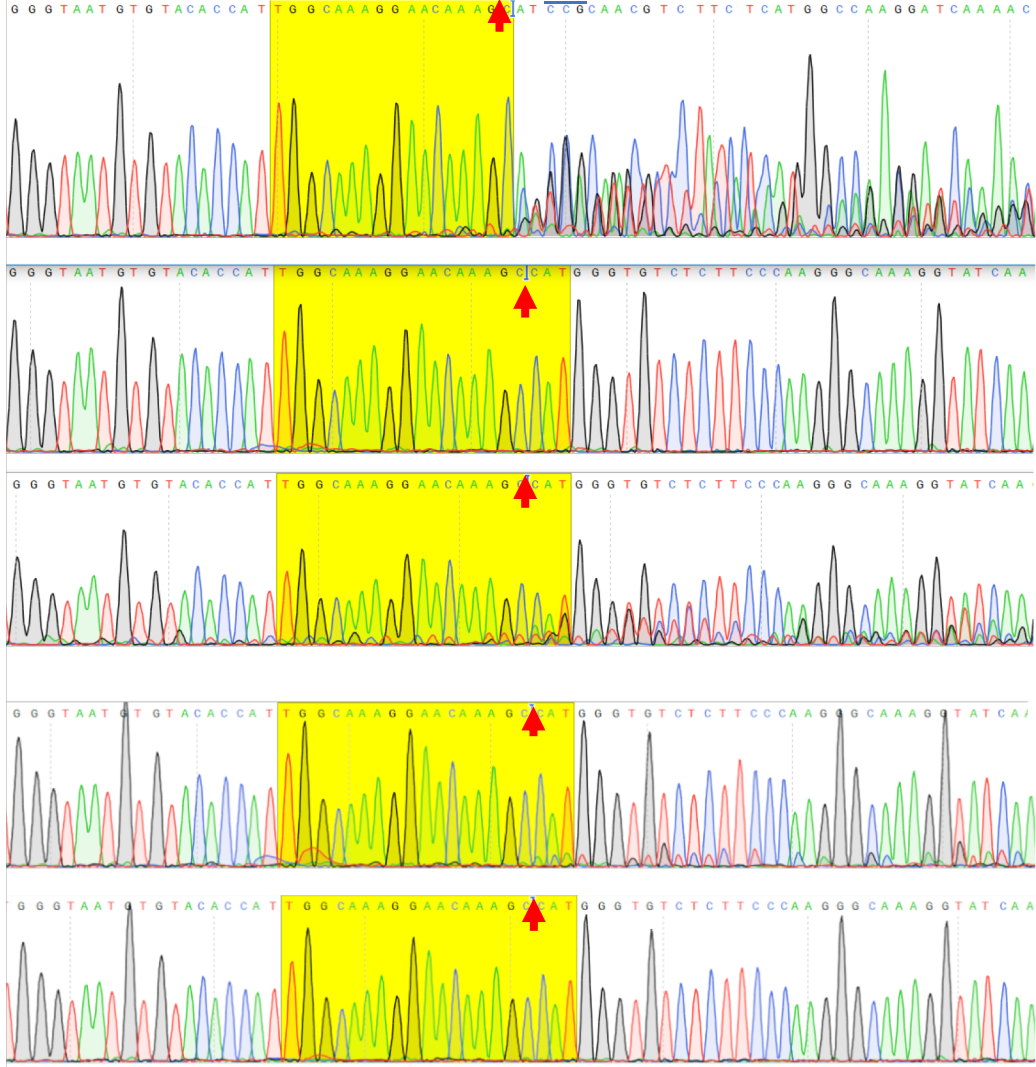


**S1 Fig.** Chromatograms and gel images of Cas-induced targeted mutations and deletions. For each target the PAM is shown in blue underline and for each candidate off-target mismatches to the spacer are shown in red. The expected cleavage site is marked with a vertical red line (|) in the target and with a red arrow ▲ in the chromatogram.

AT5G58420

spacer : TGGCAAAGGAACAAAGCCAT

Target : GGGTAATGTGTACACCATTTGGCAAAGGAACAAAGCCATGGGTGTCTCTTCCAAGGGCAAAGGTATCAA



Cas9  
Mutation at target

SpCas9 Y

xCas9 3.7 N

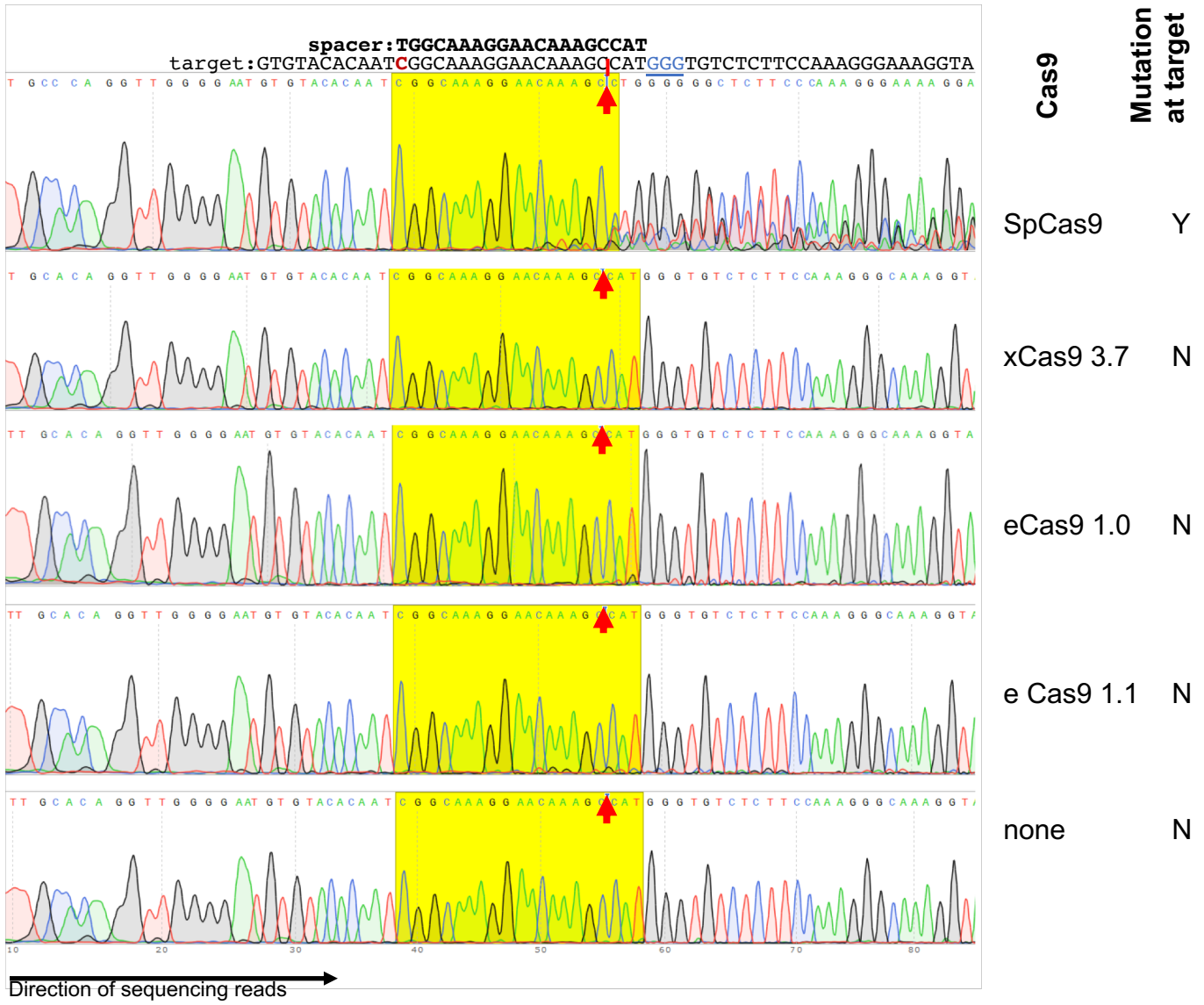
eCas9 1.0 Y

eCas9 1.1 Y

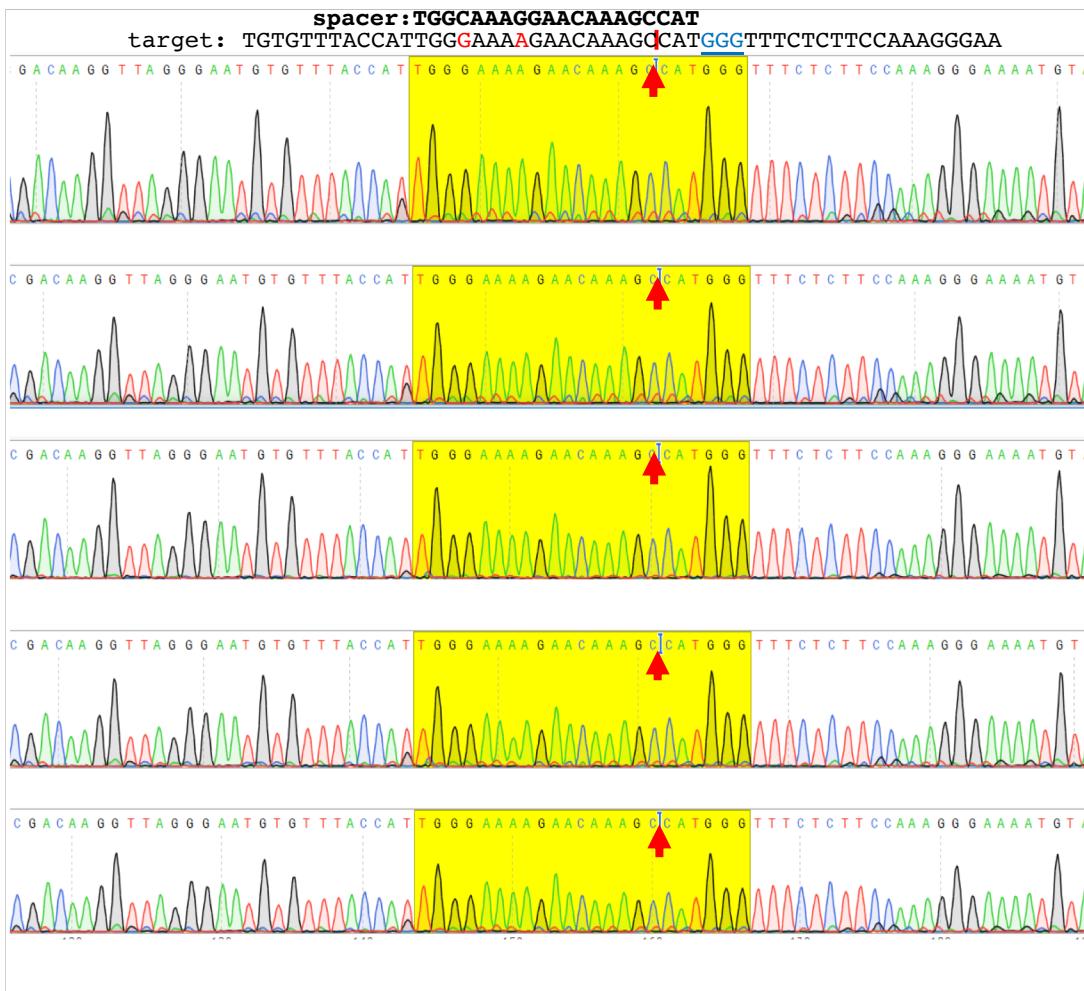
none N

Direction of sequencing reads →

AT5G07090



AT5G37072 b



Cas9  
 Mutation  
 at target

SpCas9 N

xCas9 3.7 N

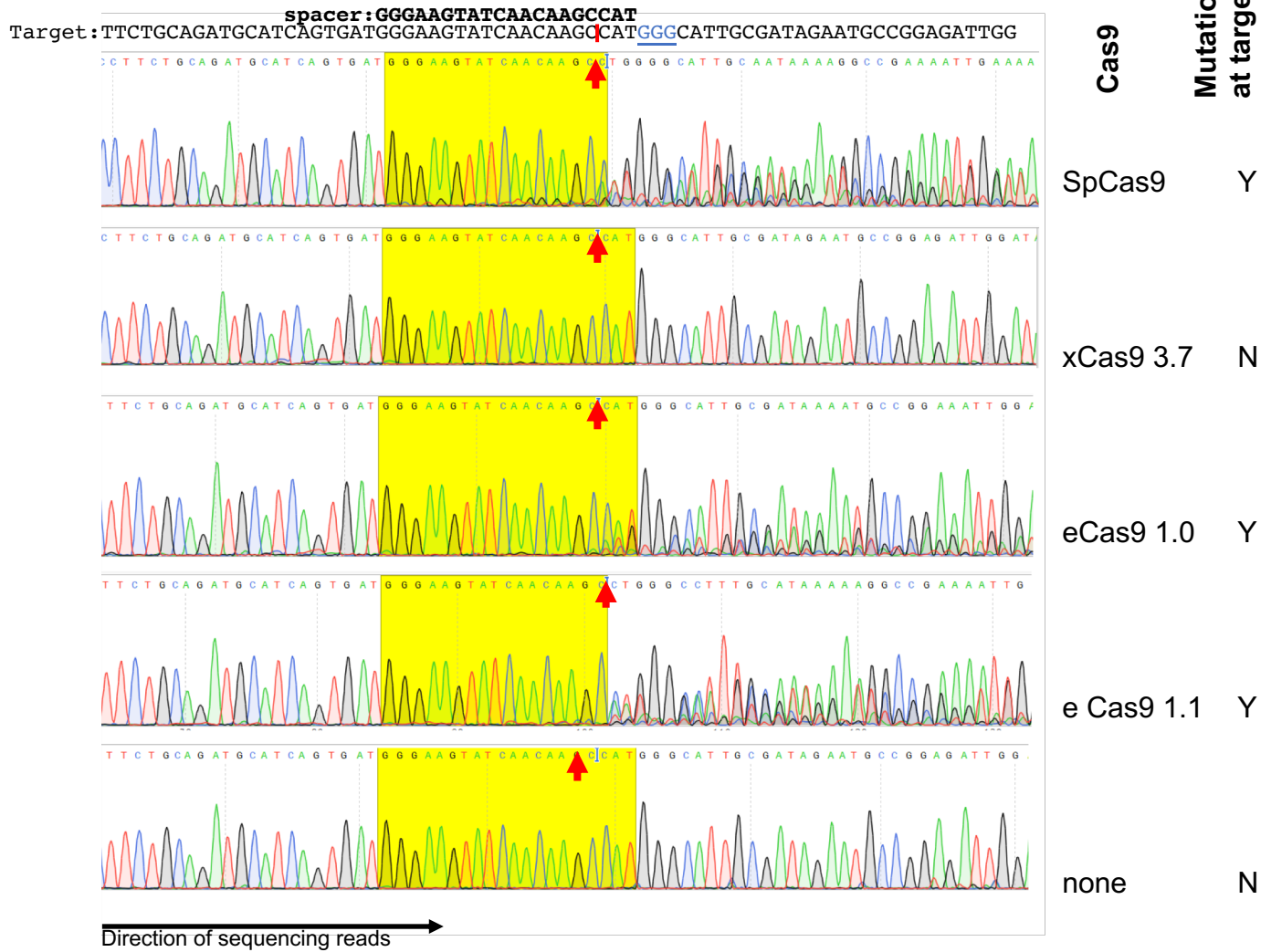
eCas9 1.0 N

eCas9 1.1 N

none N

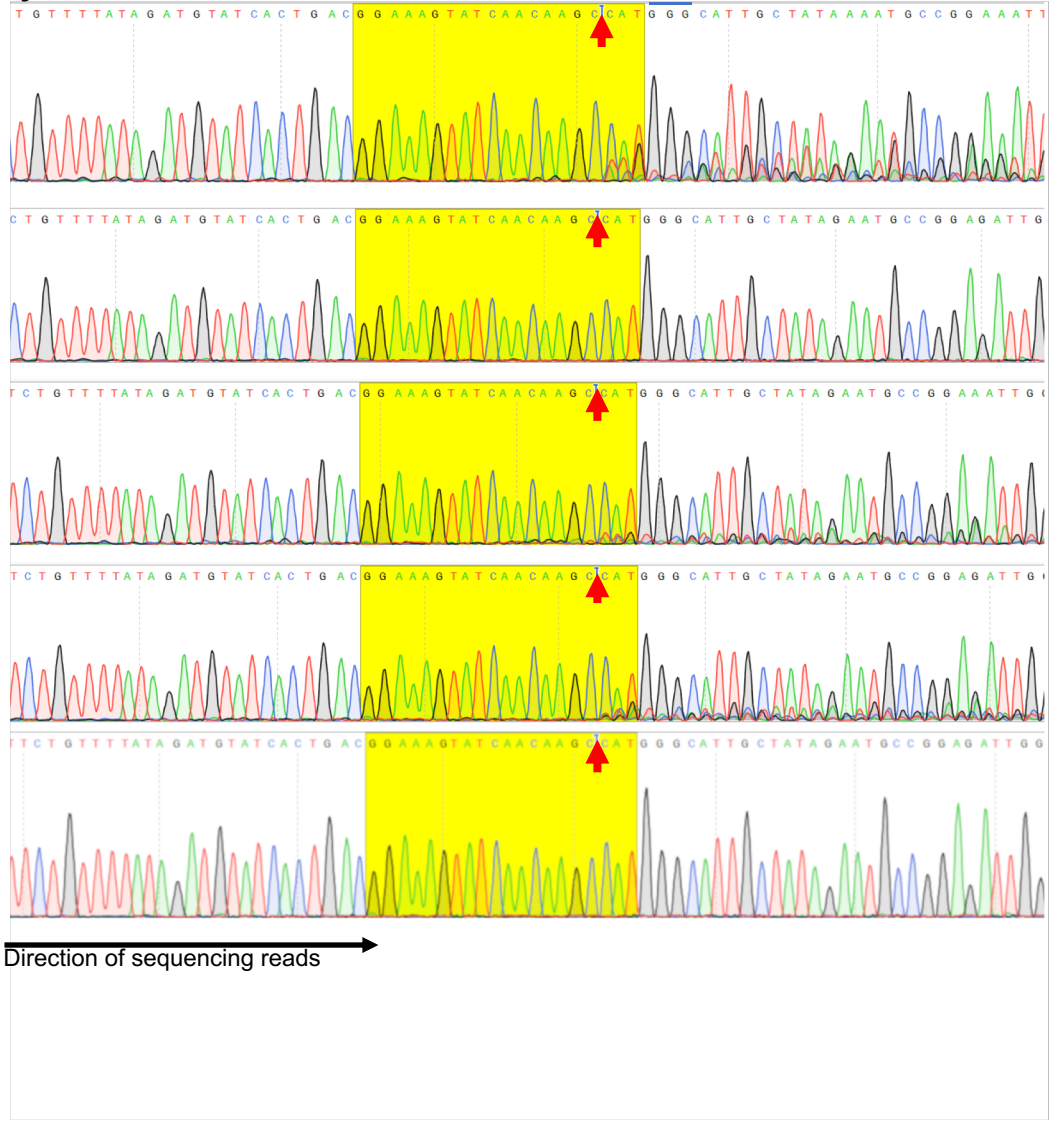


AT2G32730



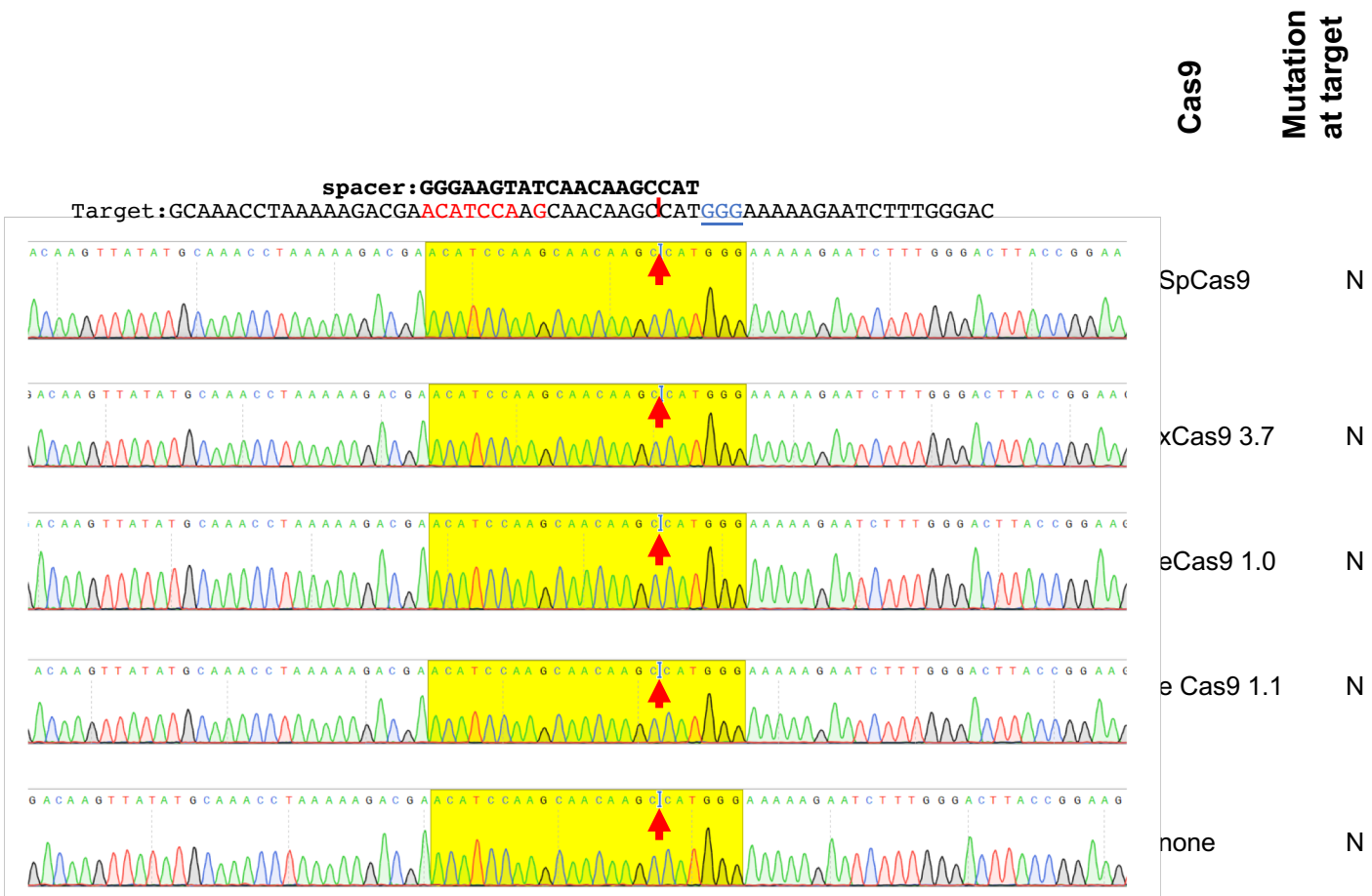
AT1G04810

spacer : **GGGAAGTATCAACAAGCCAT**  
 Target : TTTATAGATGTATCACTGACGG**AAAGTATCAACAAGCCAT**GGGCATTGCGATAGAATGCCGGAGATTGG

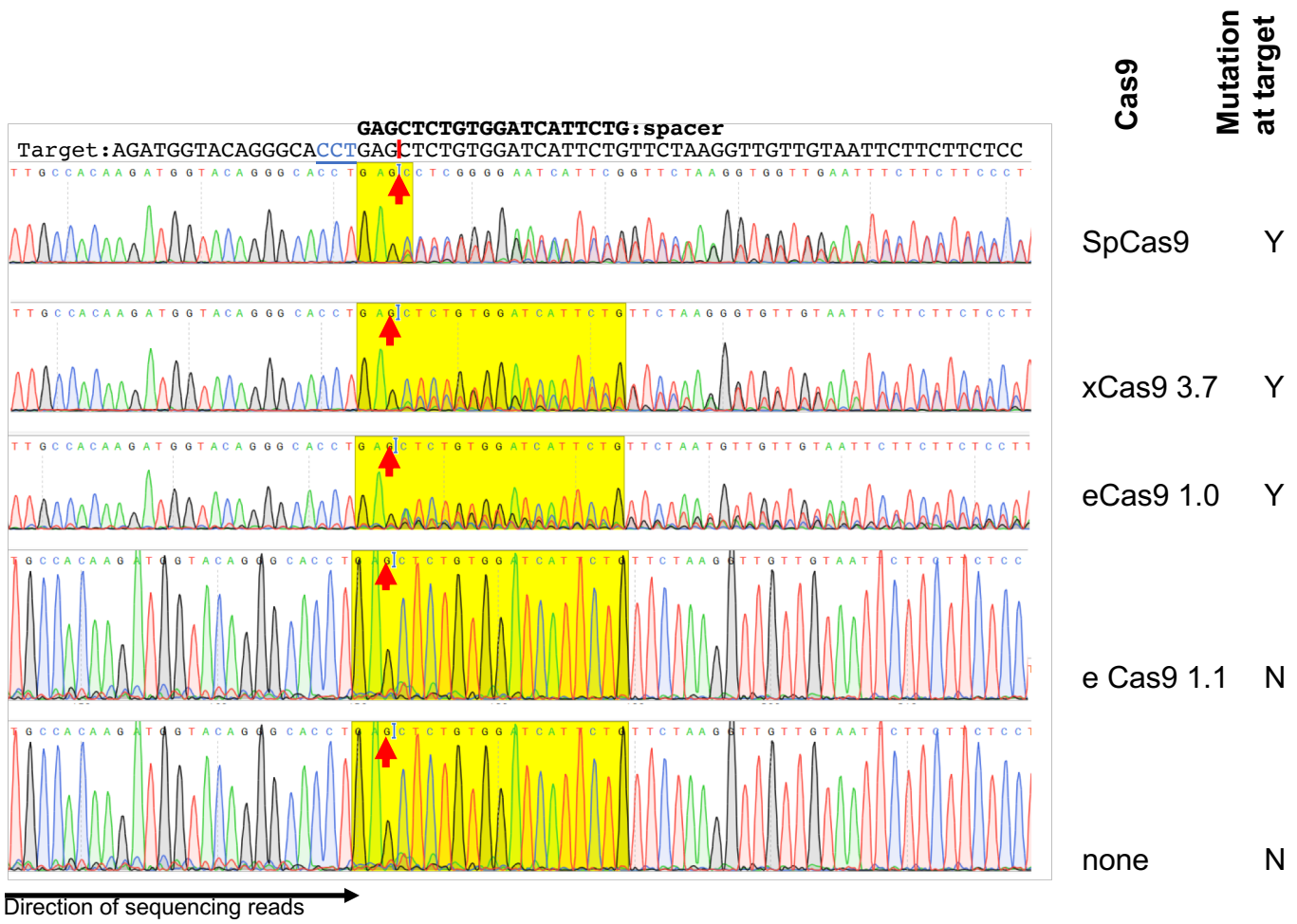


Cas9	Mutation at target
SpCas9	Y
xCas9 3.7	N
eCas9 1.0	Y
e Cas9 1.1	Y
none	N

AT5G27030



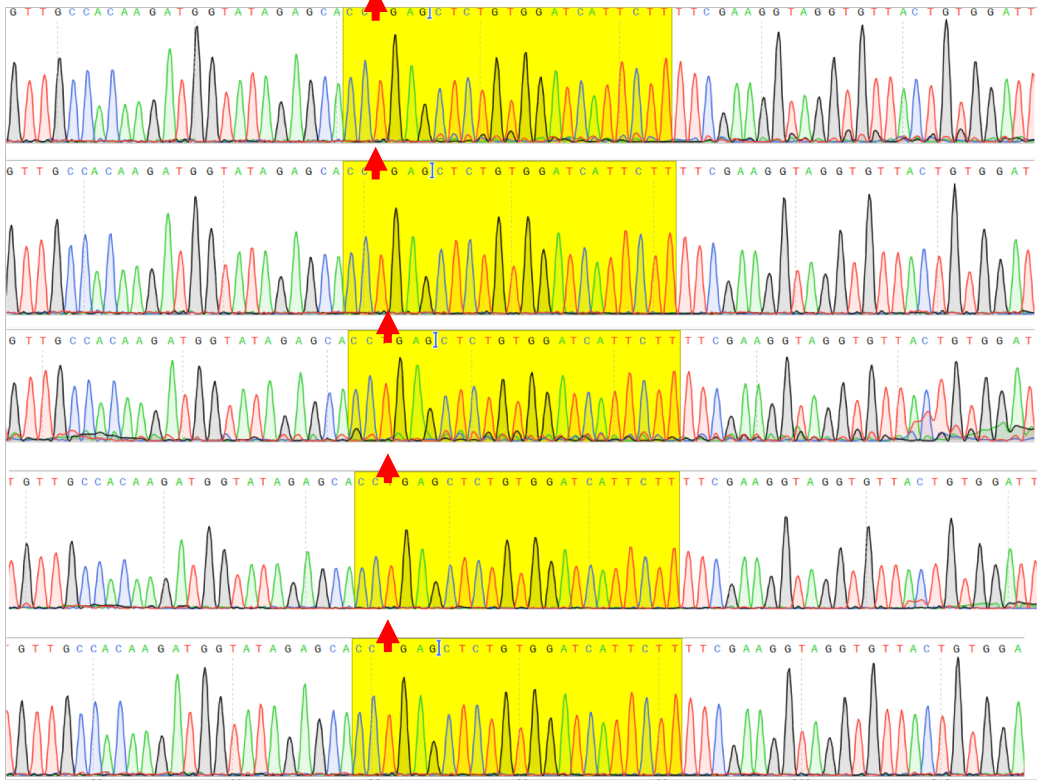
AT3G14720



AT1G53510

Target: CAAGATGGTATAGAGACCTGAGCTCTGTGGATCATTCTTTTCGAAGGTAGGTGTTACTGTGGA  
**GAGCTCTGTGGATCATTCTG: spacer**

Cas9  
 Mutation  
 at target



SpCas9 Y

xCas9 3.7 N

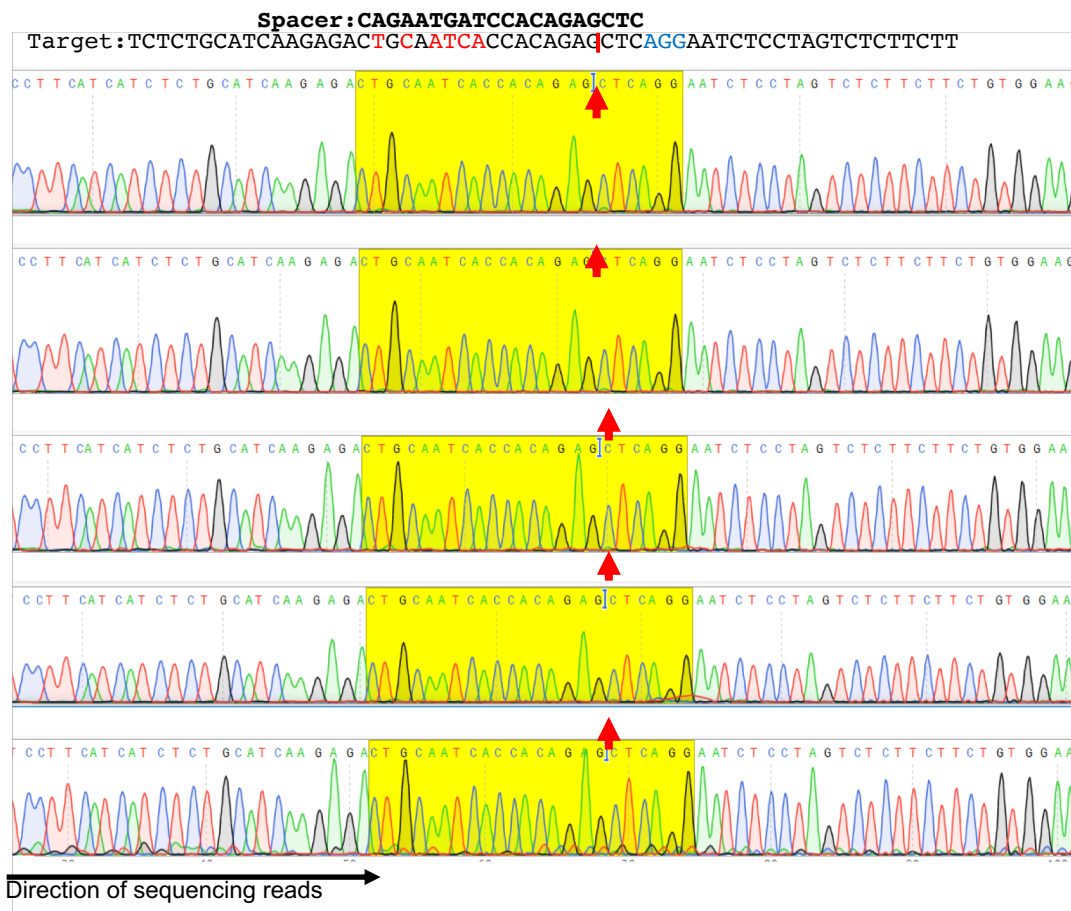
eCas9 1.0 Y

eCas9 1.1 N

none N

Direction of sequencing reads →

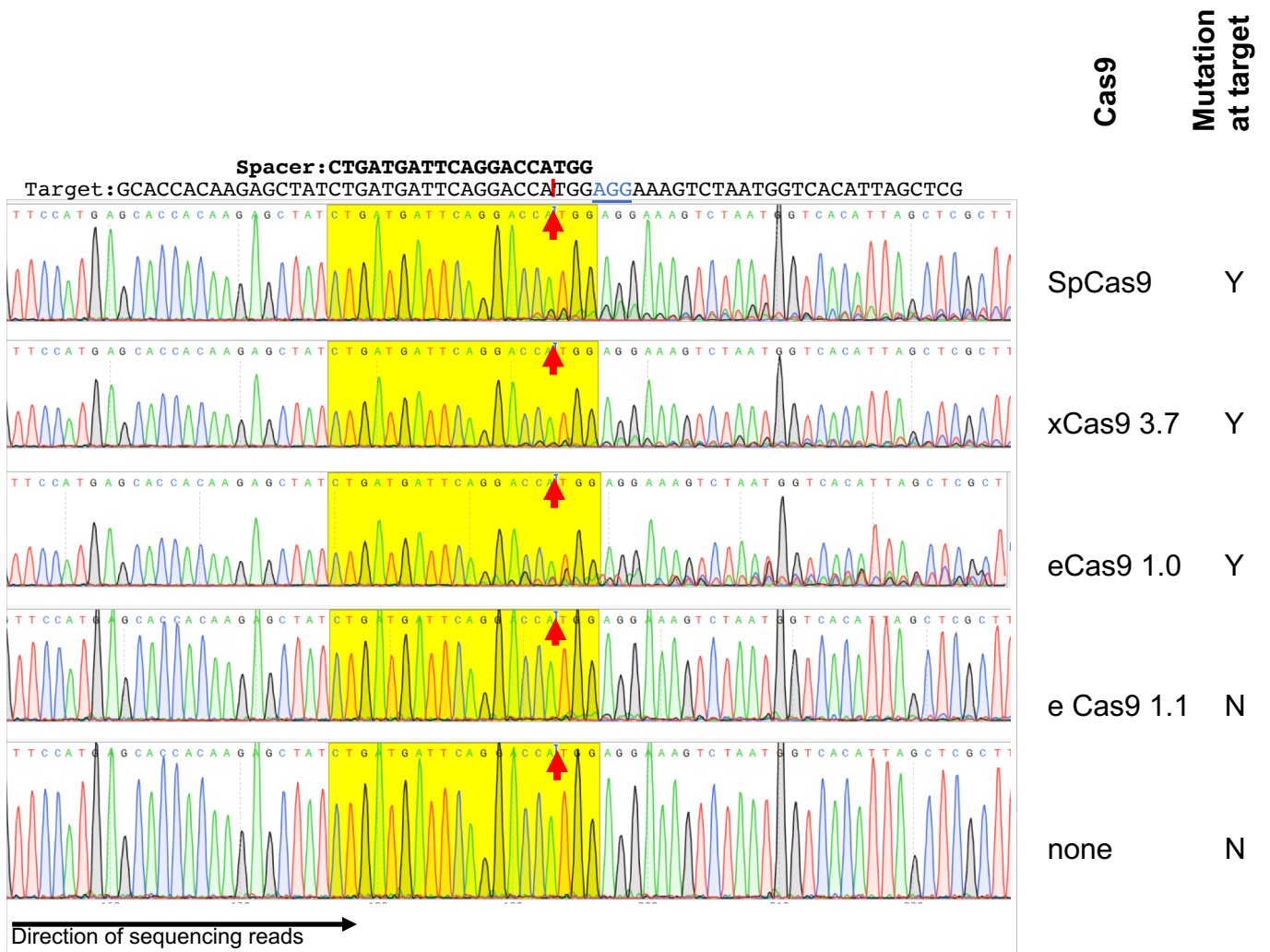
**AT5G16540**



**Cas9**  
**Mutation at target**

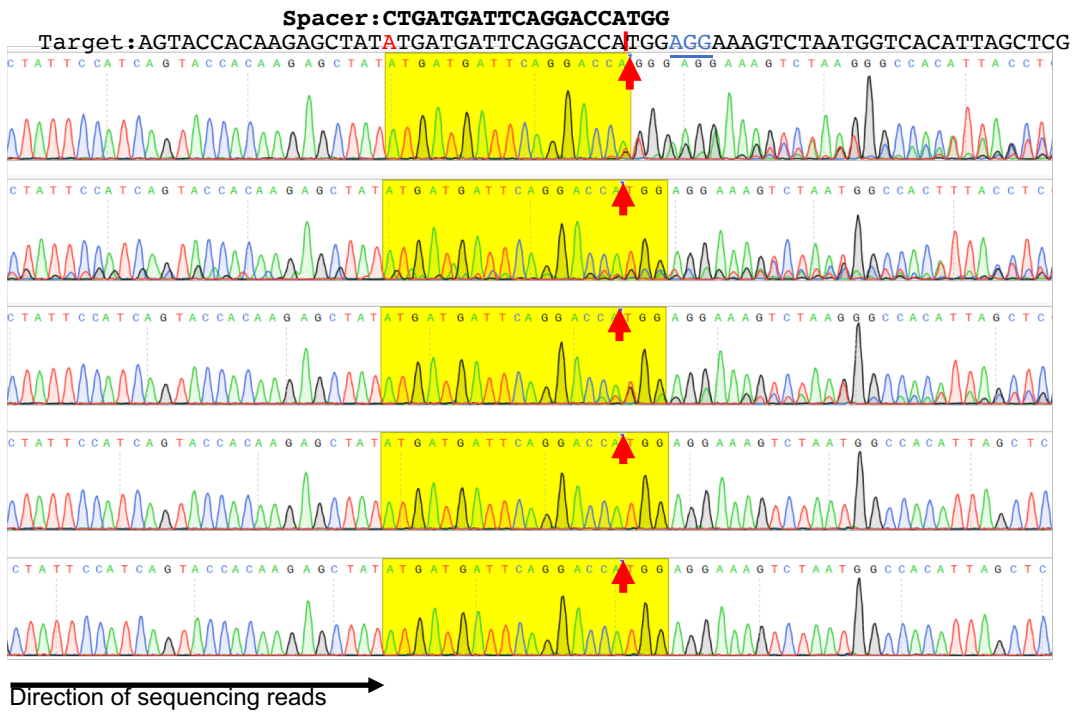
SpCas9 N  
 xCas9 3.7 N  
 eCas9 1.0 N  
 e Cas9 1.1 N  
 none N

AT5G10620





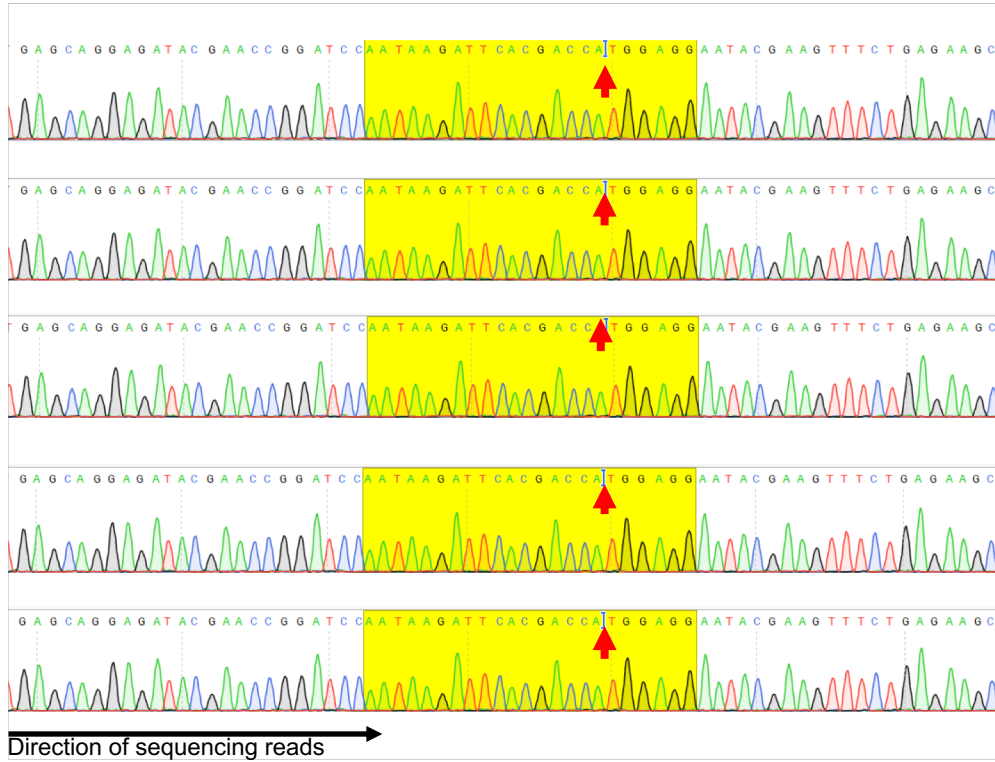
AT5G10605



Cas9	Mutation at target
SpCas9	Y
xCas9 3.7	Y
eCas9 1.0	Y
e Cas9 1.1	N
none	N

AT1G22130

Spacer : **CTGATGATTCAGGACCATGG**  
 Target : GGAGATACGAACCGGATCCAATAAGATTACGACCA**TGG**AGGAATACGAAGTTTCTGAGAAG



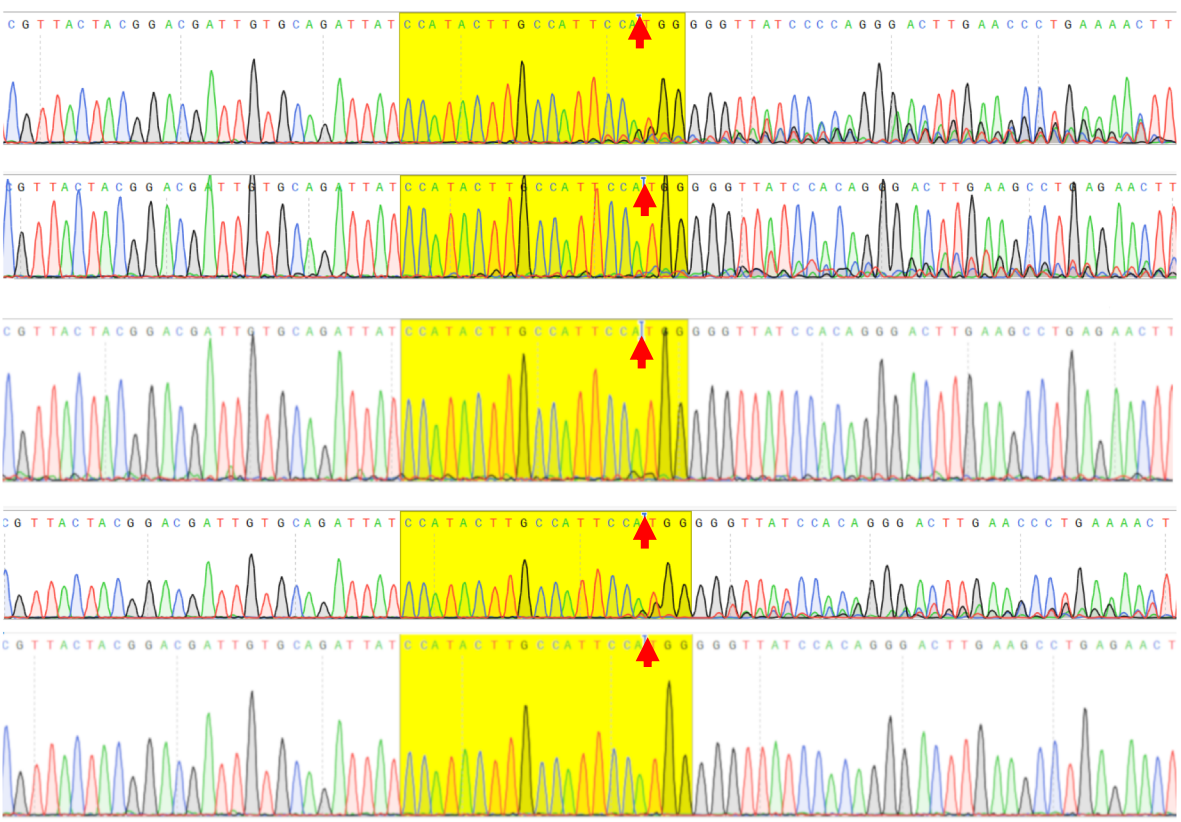
Cas9	Mutation at target
SpCas9	N
xCas9 3.7	N
eCas9 1.0	N
eCas9 1.1	N
none	N

AT5G19360

Cas9  
Mutation  
at target

Spacer : CCATACTTGCCATTCCATGG

Target : GACGATTGTCAGATTATCCATACTTGCCATTCCATGGGGTTATCCACAGGGACTTCAAGCCTGAGAACT



SpCas9 Y

xCas9 3.7 Y

eCas9 1.0 Y

eCas9 1.1 Y

none N

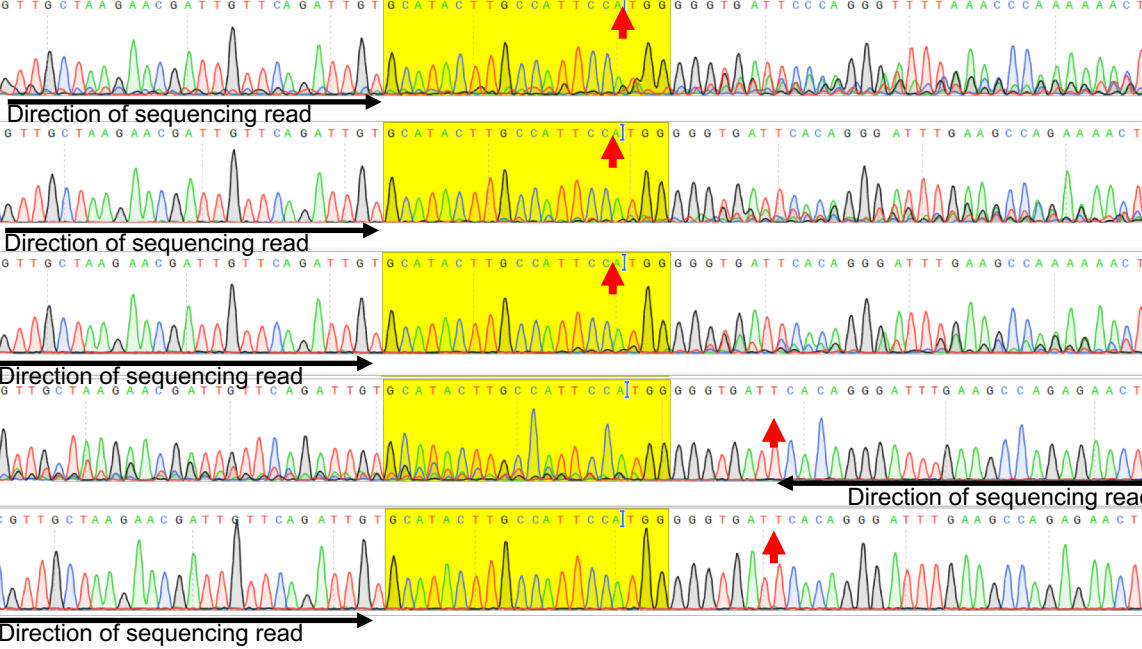
Direction of sequencing reads  
→

AT5G12180

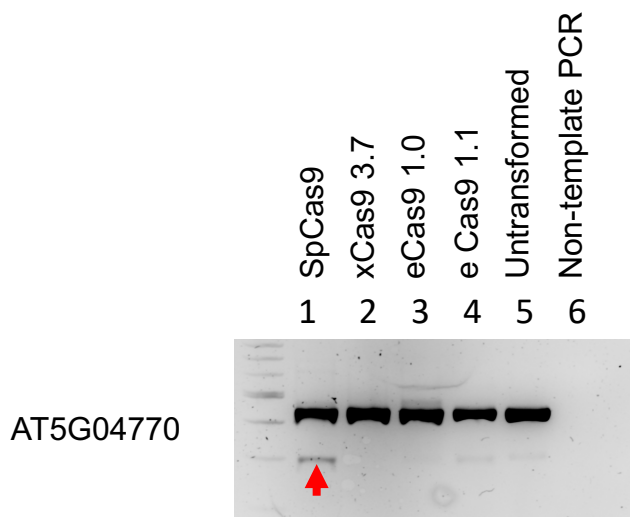
Cas9  
Mutation  
at target

Spacer: CCATACTTGCCATTCCATGG

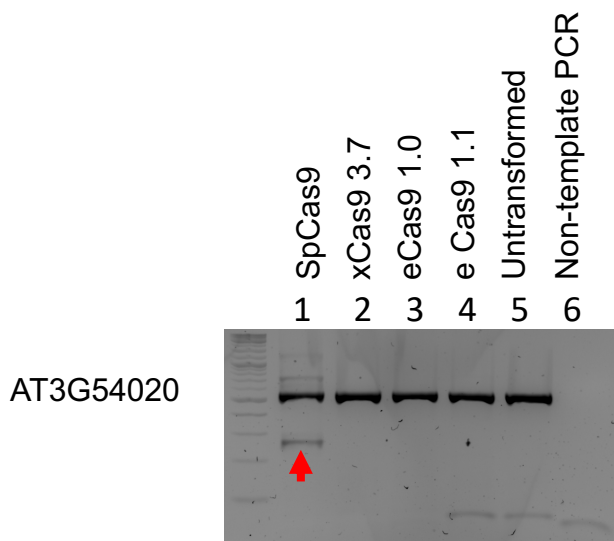
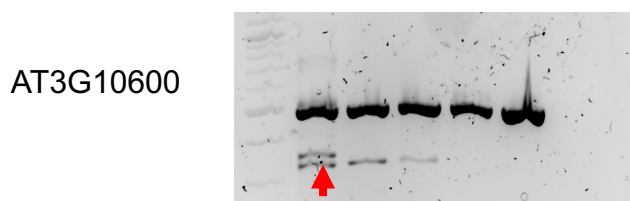
Target: GAACGATTGTTTCAGATTGTGCATACTTGCCATTCCATGGGGTGATTTCACAGGGATTGAAGCCAGAGAAGTT



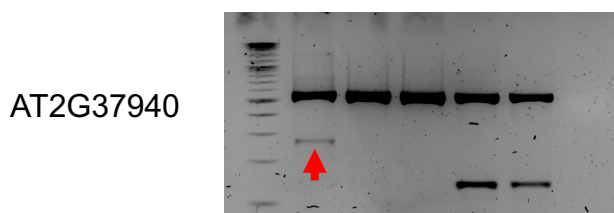
SpCas9	Y
xCas9 3.7	Y
eCas9 1.0	Y
e Cas9 1.1	Y
none	N



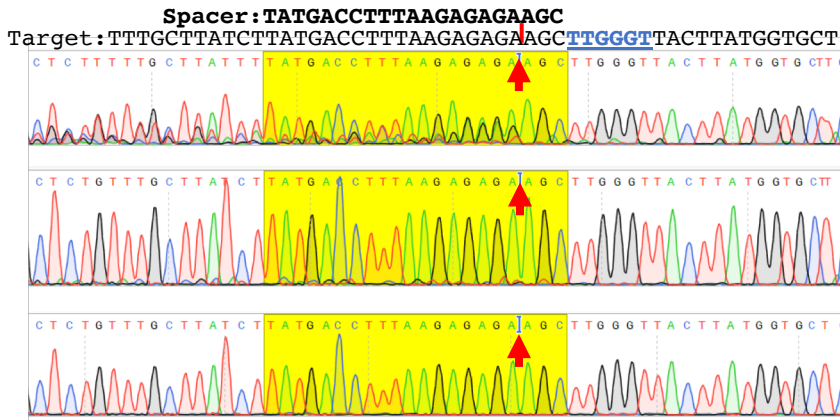
Spacer: GTCGAGACGACTAGCACGGC  
 AT5G04770: GTCGAGACGACTAGCACGGCCGG  
 AT3G10600: GTAGAGACGACTAGCACGGCCGG



Spacer: CGACAGTGATAGTTAGGGCC  
 AT3G54020: CGACAGTGATAGTTAGGGCCAGG  
 AT2G37940: CGGAGTGATAGTTAGGGCCAGG



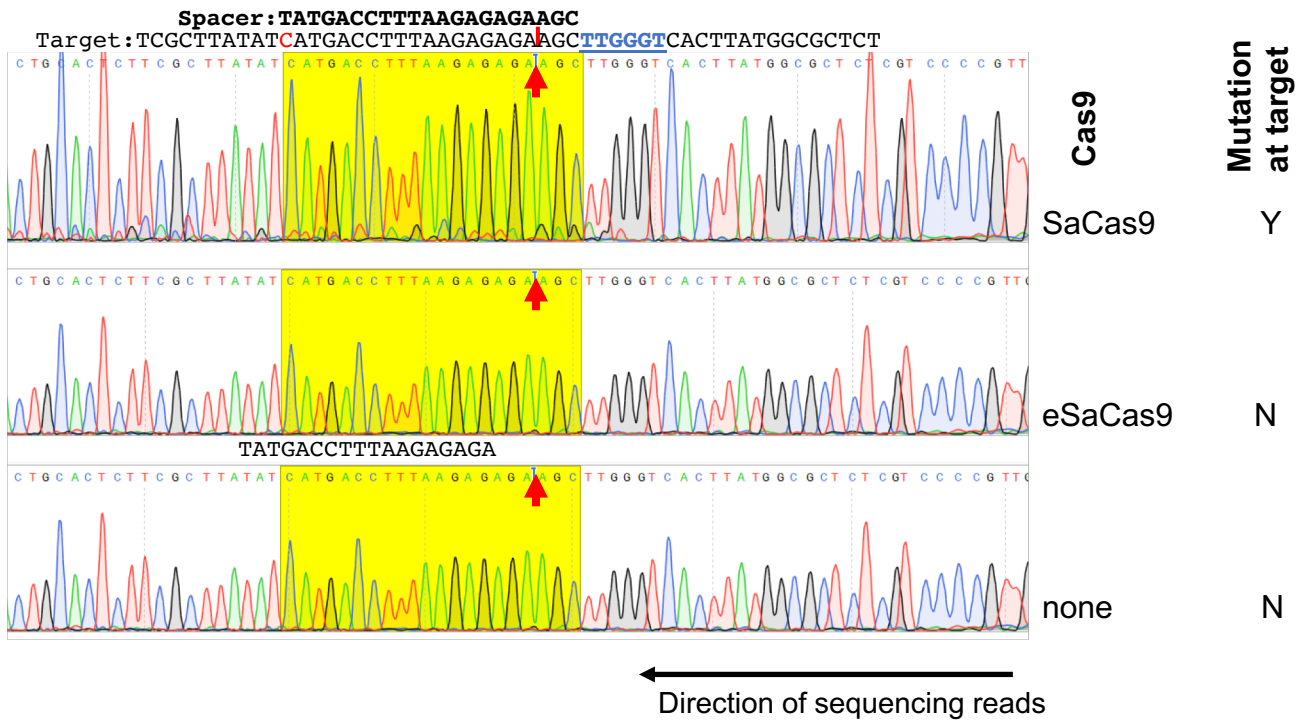
AT5G04160



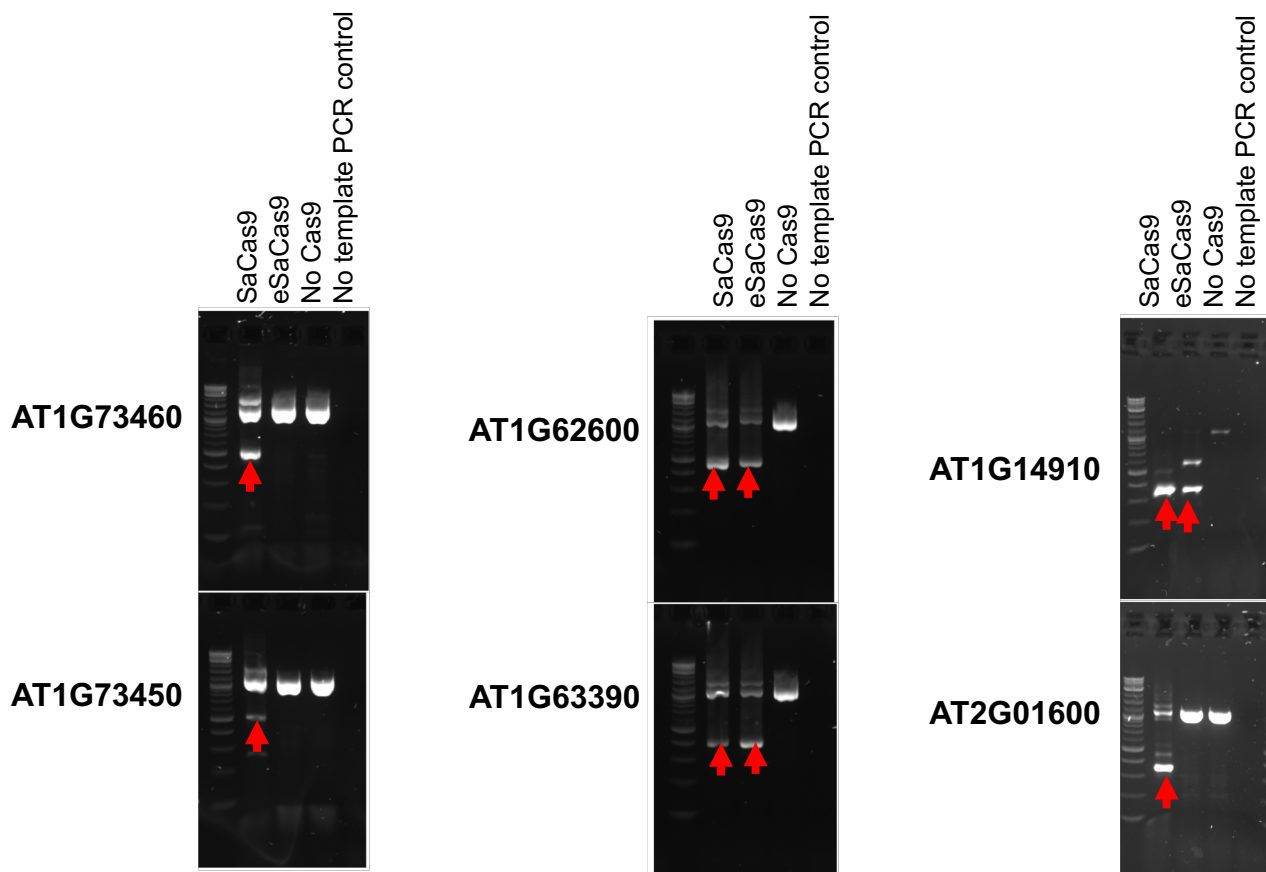
Cas9	Mutation at target
SaCas9	Y
eSaCas9	N
none	N

← Direction of sequencing read

# AT3G10290







Spacer: TTCATGGTGATCAGGACTTCC  
 AT1G73460: TTCATGGTGATCAGGACTTCCACGGGT  
 AT1G73450: **A**TTCATGGTGATCAGGACTTCCACGGGT

Spacer: GACGCTCGAATGAACAACGGA  
 AT1G62600: GACGCTCGAATGAACAACGGATCGGGT  
 AT1G63390: **A**ACGCTCGAATGAACAACGGATCGGGT

Spacer: GCCCTTGAAATATAACAAGCGT  
 AT1G14910: GCCCTTGAAATATAACAAGCGTGCGGGT  
 AT2G01600: **T**CCCTTGAAATATAACAAGCGTGCGGGT