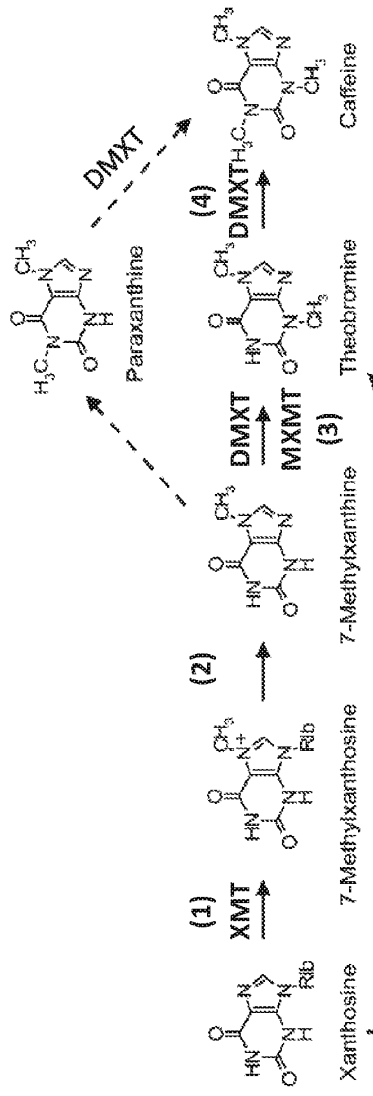
FIG. 1



Incorporated and modified from Ogita et al 2004 (Plant Mol Bio)

FIG. 2


Cc09_g06950 MELQEVLHNNGGEGEASYAKNSSFNQLVLAKVKPVLEQCVRELLRANLPNINKCIKVADL
Ca_DXNT1 MELQEVLHNNGGEGDTSYAKNSFYN-LFLIRVKPILEQCIQELLRANLPNINKCIKVADL
Cc01_g00720 MELQEVLHNNGGEGDTSYAKNSSYN-LFLIRVKPVLEQCIQELLRANLPNINKCFKVGDL
Cc09_g06960 MELQEVLHNNGGEGDTSYAKNSSYNQLVLTKVKPVLEQCIRELLRANLPNINKCIKVADL
CaXNT1 MELQEVLRNNGGEGDTSYAKNSAYNQLVLAKVKPVLEQCVRELLRANLPNINKCIKVADL
Cc09_g06970 MELQEVLRNNGGEGDTSYAKNSAYNQLVLAKVKPVLEQCVRELLRANLPNINKCIKVADL
CaMXNT2 MELQEVLHNNEGEGDTSYAKNASYN-LALAKVKPFLEQCIRELLRANLPNINKCIKVADL
CaMXNT1 MELQEVLHNNEGEGDTSYAKNASYN-LALAKVKPFLEQCIRELLRANLPNINKCIKVADL
Cc00_g24720 MELQEVLHNNEGEGDTSYAKNASYN-LALAKVKPFLEQCIRELLRANLPNINKCIKVADL
GCASGPNTLLTVRDTVQSIDKVRQEMKNELERPTIQVFLTDLFQNDFNSVFKLLPSFYRK
Ca_DXNT1 GCASGPNTLLTVRDIVQSIDKVGQEKKNELERPTIQIFLNDLFQNDFNSVFKSLPSFYRK
Cc01_g00720 GCASGPNTFSTVRDIVQSIDKVGQEKKNELERPTIQIFLNDLFQNDFNSVFKLLPSFYRN
Cc09_g06960 GCASGPNTLLTVRDIVQSIDKVGQEEKNELEHPTIQIFLNDLFQNDFNSVFKLLPSFYRK
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Cc09_g06970 GCASGPNTLLTVRDIVQSIDKVGQEKKNELERPTIQIFLNDLFPNDFNSVFKLLPSFYRK
CaMXNT2 GCASGPNTLLTVRDIVQSIDKVGQEEKNELERPTIQIFLNDLFQNDFNSVFKLLPSFYRK
CaMXNT1 GCASGPNTLLTVRDIVQSIDKVGQEEKNELERPTIQIFLNDLFQNDFNSVFKLLPSFYRK
Cc00_g24720 GCASGPNTLLTVRDIVQSIDKVGQEEKNELERPTIQIFLNDLFQNDFNSVFKLLPSFYRK
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Ca_DXNT1 LEKENGRKIGSCLIGAMPGSFYGRLFPEESNHFLHSCYCLHWLSQVPSGLVTEL GISANK
Cc01_g00720 LEKENGRKIGSCLIGAMPGSFYSRLFPEESNHFLHSCYCLHWLSQVPSGLVTELGISVNK
Cc09_g06960 LEKENGRKIGSCLISAMPGSFYGRLFPEESNHFLHSCYSVHWLSQVPSGLVTELGISANK
CaXNT1 LEKENGRKIGSCLIGAMPGSFYSRLFPEESNHFLHSCYCLQWLSQVPSGLVTELGISTNK
Cc09_g06970 LEKENGRKIGSCLIGAMPGSFYSRLFPEESNHFLHSCYCLQWLSQVPSGLVTESGISTNK
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CaMXNT1 LEKENGRKIGSCLISAMPGSFYGRLFPEESNHFLHSCYSVHWLSQVPSGLVIELGIGANK
Cc00_g24720 LEKENGRKIGSCLISAMPGSFYGRLFPEESNHFLHSCYSVHWLSQVPSGLVIELGIGANK
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Ca_DXNT1 GCIYSSKASRPPIQKAYLDQFTKDFT TFLRIHSEELISRGRNLLTWICKEDEFENPNSID
Cc01_g00720 GCIYSSKASRPPIQKAYLDQFTKDFTTFLRIHSEELISRGRMLLTFICKEDEFDHPNSND
Cc09_g06960 GIIYSSKASPPPVQKAYLDQFTKDFTTFLRIHSEELLSGGRMLLTCICKGDESDGLNTID
CaXNT1 GSIYSSKASRLPVQKAYLDQFTKDFTTFLRIHSEELFSHGRMLLTCIC KGVELDARNAID
Cc09_g06970 GSIYSSKASRLPVQKAYLDQFTKDFTTFLRIHSEELFSHGRMLLTCICKGVELDARNAID
CaMXNT2 GSIYSSKASRPPVQKAYLDQFTKDFTTFLRIHSKELFSRGRMLLTCICKVDEYDEPNPLD
CaMXNT1 GSIYSSKGCRPPVQKAYLDQFTKDFTTFLRIHSKELFSRGRMLLTCICKVDEFDEPNPLD
Cc00_g24720 GSIYSSKGCRPPVQKAYLDQFTKDFTTFLRIHSKELFSRGRMLLTCICKVDEFDEPNPLD

FIG. 2 continuation



FIG. 3

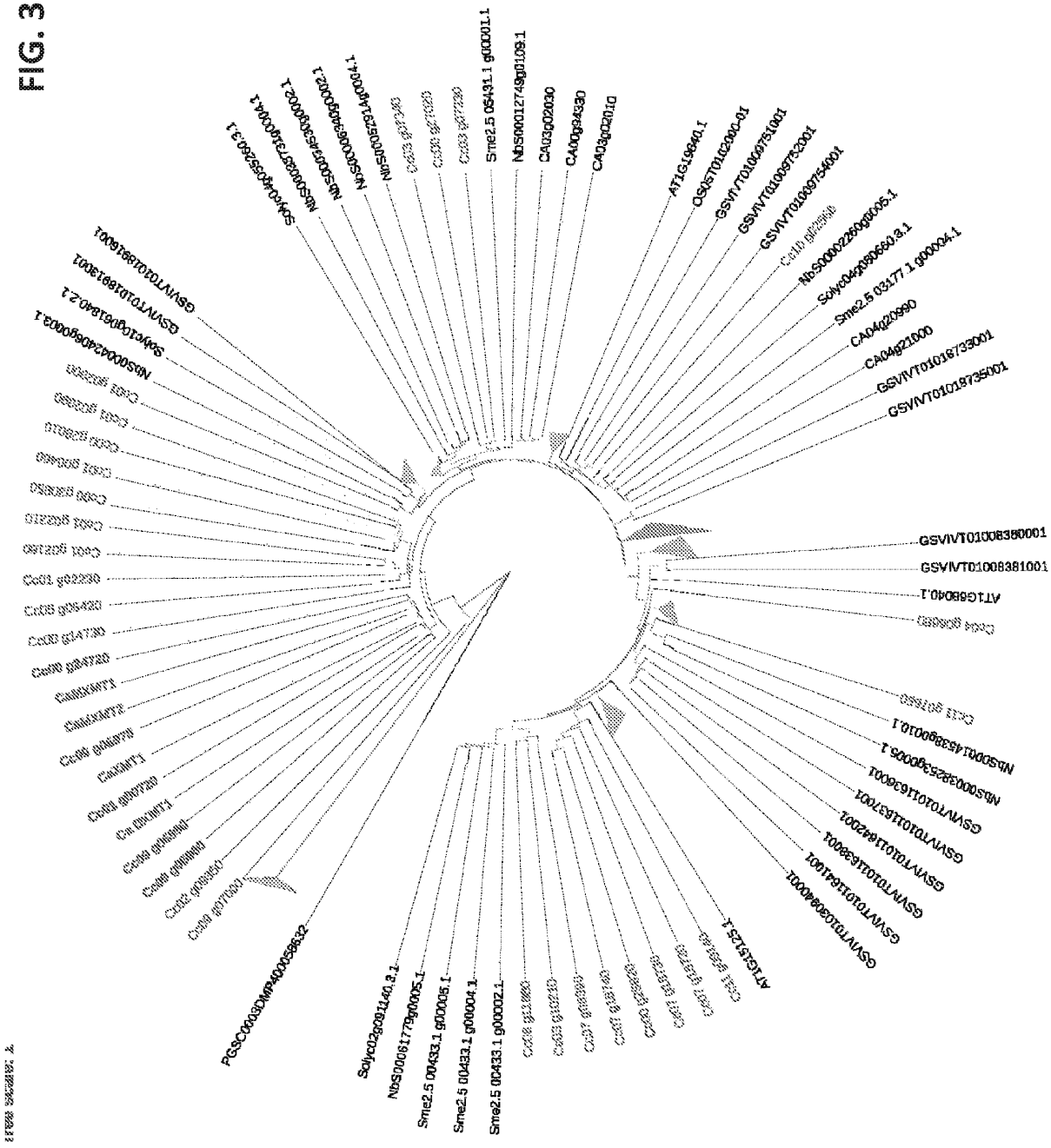

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CA00g34330
CA03g02010
AT1G19640.1
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GSVIVT01009751001
GSVIVT01009752001
GSVIVT01009754001
Cs10 g02590
Nbs000022650g0005.1
Solyc04g080660.3.1
Sme2.5 03177.1 g00004.1
CA04g20990
CA04g21000
GSVIVT01016733001
GSVIVT01018735001
GSVIVT01008360001
GSVIVT01008381001
AT1G66040.1
Cs04 g09660
Cs11 g01660
Nbs000145389g0010.1
Nbs000382539g0005.1
Nbs000011636001
GSVIVT01011653701
GSVIVT01011664201
GSVIVT01016436001
GSVIVT01011641001
GSVIVT01003984001
AT1G51125.1
Cs01 g02230
Cs05 g05420
Cs00 g14730
Cs00 g08720
Cs00 g08710
Cs00 g08700
Cs00 g08690
Cs00 g08680
Cs02 g03950
Cs09 g07750
PGSC0003DMP400059632
Solyc02g091140.3.1
Nbs000617779g0005.1
Sme2.5 00433.1 g00005.1
Sme2.5 00433.1 g00004.1
Sme2.5 00433.1 g00002.1
Cs08 g12660
Cs03 g03210
Cs07 g08990
Cs01 g08710
Cs02 g03220
Cs01 g02220
Cs01 g02210
Cs01 g02200
Cs01 g02230
Cs05 g05420
Cs00 g14730
Cs00 g08720
Cs00 g08710
Cs00 g08700
Cs00 g08690
Cs00 g08680
Cs02 g03950
Cs09 g07750
Nbs000024068g0003.1
Solyc10g081840.2.1
GSVIVT01018913001
GSVIVT01018916001
Solyc04g080660.3.1
Nbs000229650g0005.1
GSVIVT01009754001
GSVIVT01009752001
GSVIVT01009751001
OS05T0102000-01
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CA00g34330
CA03g02010

FIG. 4

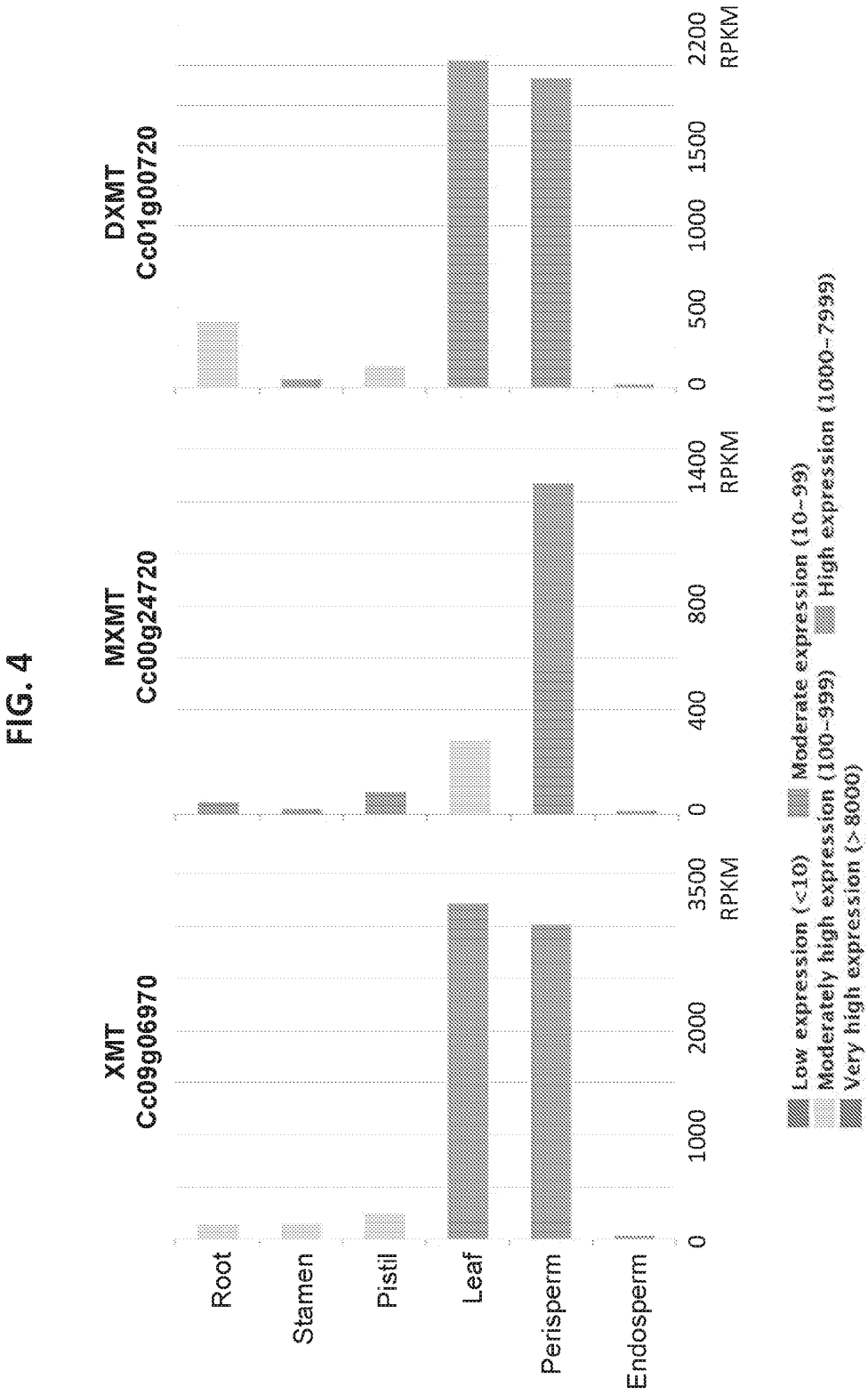

XMT
Cc09g06970
MXMT
Cc00g24720
DXMT
Cc01g00720
Root
Stamen
Pistil
Leaf
Perisperm
Endosperm
0
1000
2000
3500
0
400
800
1400
0
500
1000
1500
2200
RPKM
Low expression (<10)
Moderate expression (10-99)
Moderately high expression (100-999)
High expression (1000-7999)
Very high expression (>8000)

FIG. 5

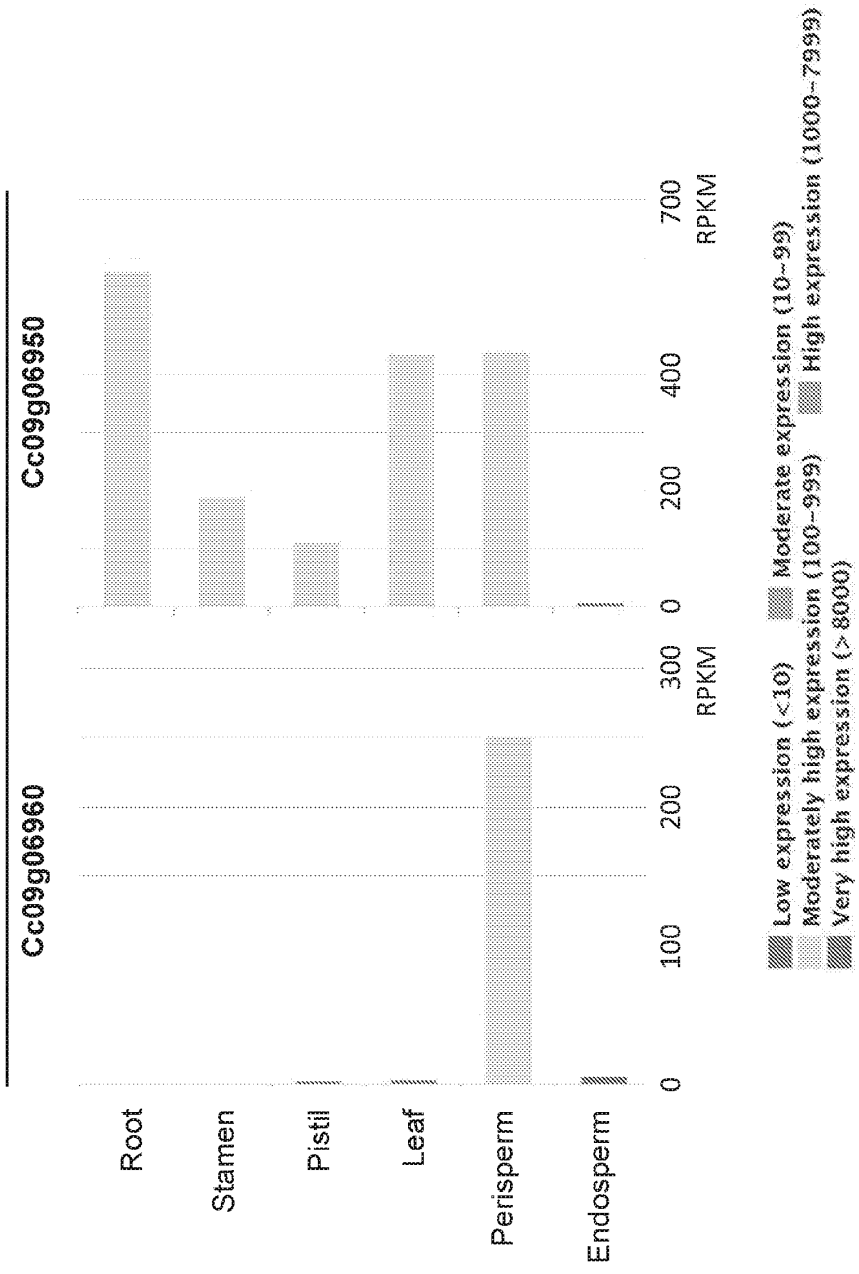

XMT / MXMT / DXMT
Cc09g06960
Cc09g06950
Root
Stamen
Pistil
Leaf
Perisperm
Endosperm
0
100
200
300
0
200
400
700
RPKM
RPKM
Low expression (<10)
Moderate expression (10~99)
Moderately high expression (100~999)
High expression (1000~7999)
Very high expression (>8000)

FIG. 6

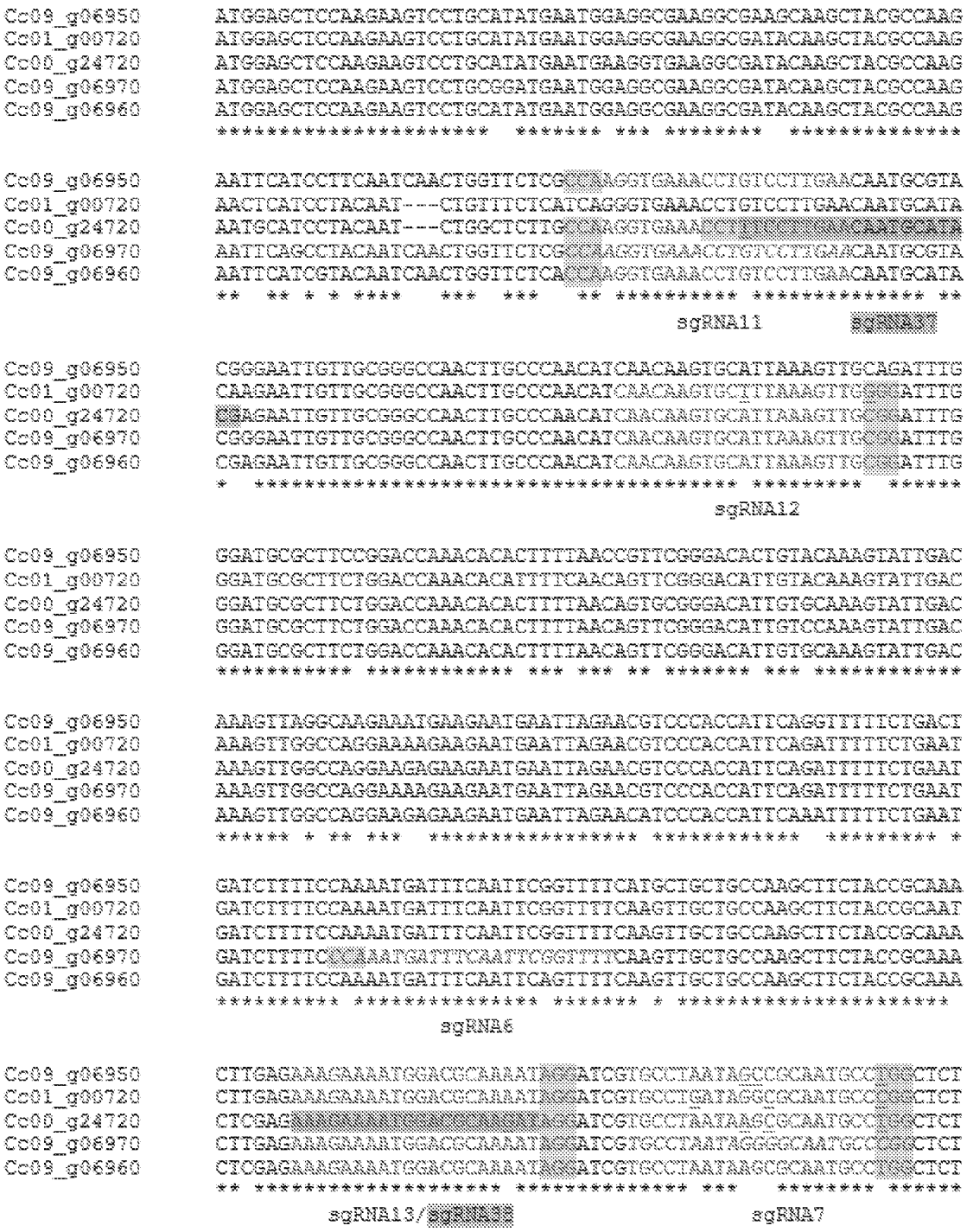

Co09_g06950
Co01_g00720
Co00_g24720
Co09_g06970
Co09_g06960
sgRNA11
sgRNA12
sgRNA6
sgRNA13/sgRNA14
sgRNA7

FIG. 6 continuation (1)

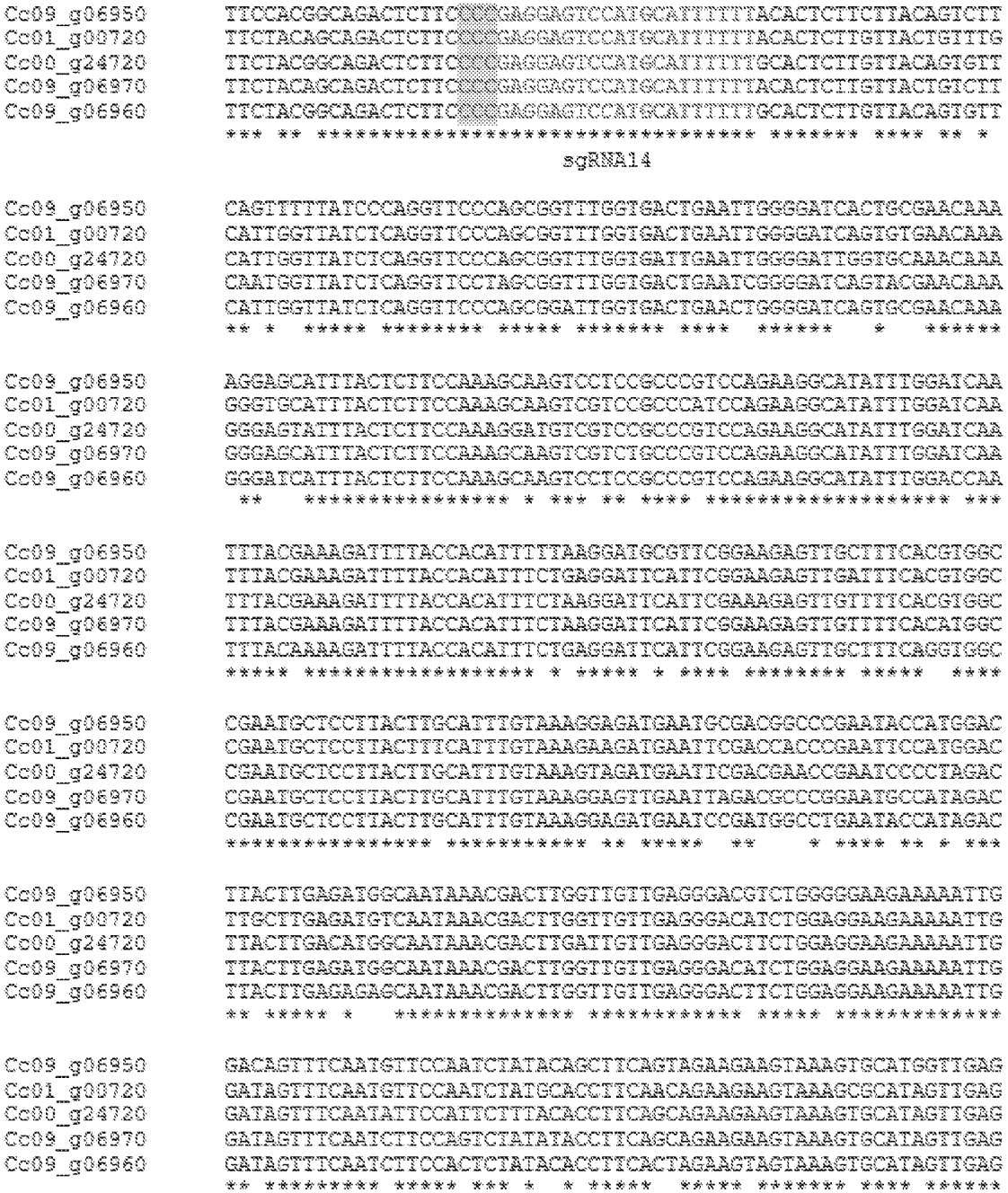
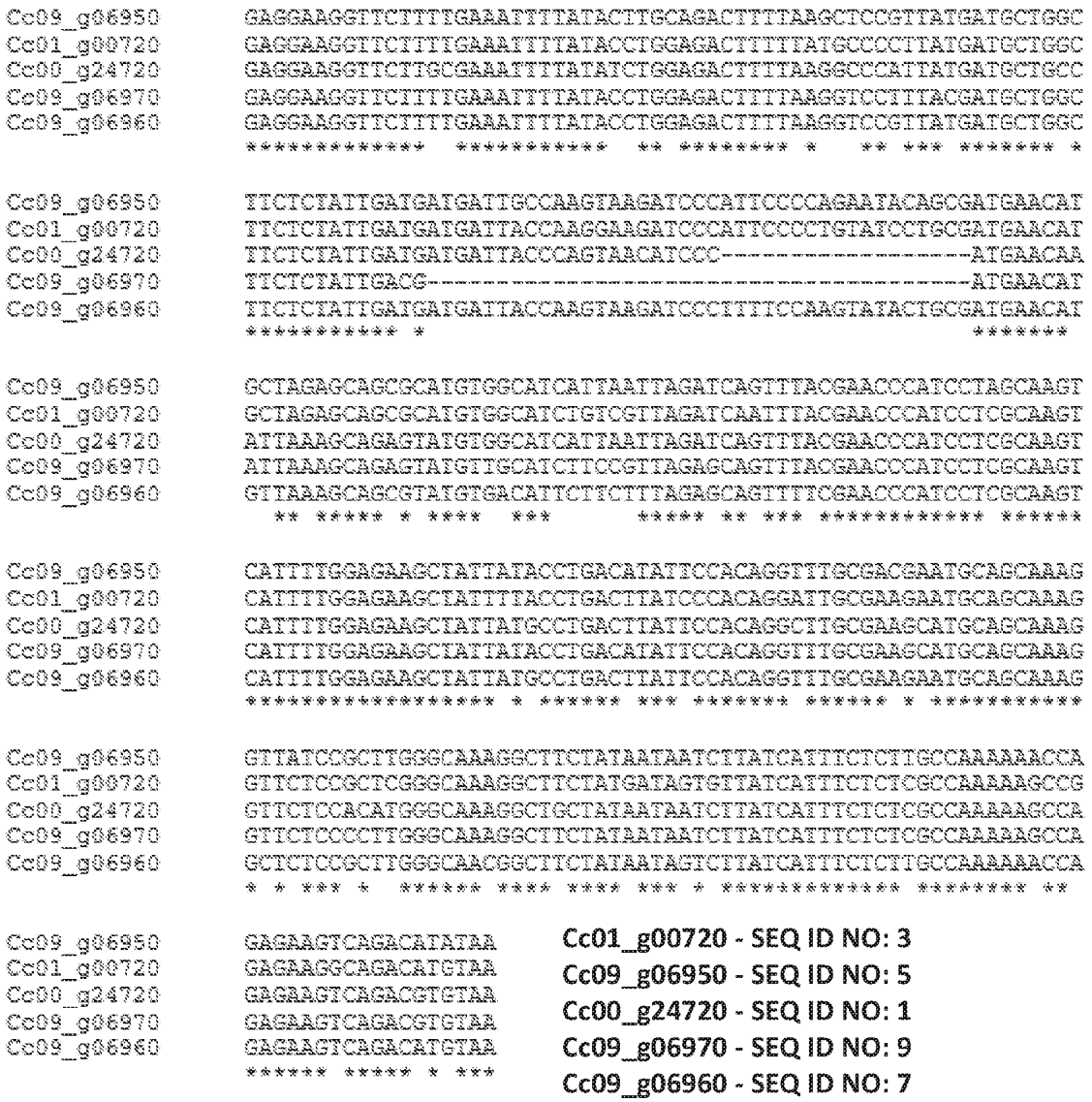


FIG. 6 continuation (2)



Cc01_g00720 - SEQ ID NO: 3
Cc09_g06950 - SEQ ID NO: 5
Cc00_g24720 - SEQ ID NO: 1
Cc09_g06970 - SEQ ID NO: 9
Cc09_g06960 - SEQ ID NO: 7

FIG. 7A

XMT Cc09_g06970 - SEQ ID NO: 25

Cc09_g06970

ATGGAGCTCCAAGAAGTC**C**TGC**GG**ATGAATG**G**AG**G**CGAAGGCGATACA**A**GCTACGCCAAGAATTCAGCCTACAATGTCTGTCTGTCTCTCTATCTC
TCTTTAACACACACACACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATCTCTAACTTAGTATGTCTTTTTTCCCCCCTTAACATTTGTATT
TTGGAGTGGTATGTGTAGCAACTGGTTCTCG**CCAAGGTGAAACCTGTCCTTGAA**CAATGCGTACGGGAATTGTTGCGGGCCAACTTGCCCAACATC
AACAAGTGCATTAAAGTTGCGGATTTGGGATGCGCTTCTGGACCAAACACACTTTTAACAGTTCGGGACATTGTCCAAAGTATTGACAAAGTTGG
CCAGGAAA**A**AGAAGAATGAATTAGAACGTCCCACCATTCAGATTTTTCTGAATGATCTTTTC**CCAAATGATTTCAATTCGGTTTT**CAAGTTGCTGC
CAAGCTTCTACCGCAAACT**T**GAG**AAAGAAAATGGACGCAAAAT**AGGATCG**TGCCTAATAGGGGCAATGCC**CGGCTCTTTCTAC**A**GCAGACTCTTC
CCCGAGGAGTCCATGCATTTTTTACACTCTTGTTAC**T**GT**C**TTCAA**T**GGTTATCTCAGGTCTTTGAGTTAATCCCTTTTATCTTTTTAATTTTTCTT
GTAGCAAAAATAGTTCATGATTTTCATTCAACACATTAGTAACTATGCACGGAAATTTCTTTAATAATTCTCAAGATATCCACAGGAATCCAAGAA
AGAGATTTCTGAAGAAACTAATAACATATTTTATT**C**AAGTCGTGGCTCATGATTTA**T**ATTCCCACATGCAACACTAACAAAATGATCCAACTATAT
AAGTTACCAGCTCTGGACGTGCAGGTTCCTAGCGGTTTGGTGACTGAATCGGGGATCAGTACGAACAAAGGGAGCATTTACTCTTCCAAAGCAAGTC
GTCTGCCCGTCCAGAAGGCATATTTGGATCAATTTACGAAAGATTTTACCACATTTCTAAGGATT

11	CCAAGGTGAAACCTGTCCTTGAA	**SEQ ID NO: 26**
12	CAACAAGTGCATTAAAGTTGCGG	**SEQ ID NO: 27**
6	CCAAATGATTTCAATTCGGTTTT	**SEQ ID NO: 28**
13	AAAGAAAATGGACGCAAAATAGG	**SEQ ID NO: 29**
7	TGCCTAATAGGGGCAATGCCCGG	**SEQ ID NO: 30**
14	CCCGAGGAGTCCATGCATTTTTT	**SEQ ID NO: 31**

sgRNA target sequence

FIG. 7B

Cc09_g06960

XMT/MXMT/DXMT Cc09_g06960 - SEQ ID NO: 32

TCATTCGTGTCTGGTTCCCATTGGCTGTGCGCTTTCTTTCTGACCCATTGACAGACTTTTCTACGCACGTAACTAGCTGGTTAGCATACGCATCTATGAAATTTTC
GCTATTTAAGCCCGAAATTTTGCACAATTAATCATTAACAGACACCTTCTTTAGCCGTCGCAATTCGATTGTCCTGTATATGAATGGAGCTCCAAGAAGTCCTGC
ATATGAATGGAGGCGAAGGCGATACAAGCTACGCCAAGAATTCATCGTACAATGTCTGTCTGTCTATCTCTCTCTTTAACACACACACACACACAGAGTAGTAG
TAAATTATGCTATGATACGTTGATCTCTGACTTAGTATGTCTTTTTTCGCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTAGCAACTGGTTCTCACCAAGGTG
AAACCTGTCCTTGAACAATGCATACGAGAATTGTTGCGGGCCAACTTGCCCAACATCAACAAGTGCATTAAAGTTGCGGATTTGGGATGCGCTTCTGGACCAA
ACACACTTTTAACAGTTCGGGACATTGTGCAAAGTATTGACAAAGTTGGCCAGGAAGAGAAGAATGAATTAGAACATCCCACCATTCAAATTTTTCTGAATGAT
CTTTTCCAAAATGATTTCAATTCAGTTTTCAAGTTGCTGCCAAGCTTCTACCGCAAACTCGAGAAAGAAAATGGACGCAAAATAGGATCGTGCCTAATAAGCGC
AATGCCTGGCTCTTTCTACGGCAGACTCTTCCCCGAGGAGTCCATGCATTTTTTGCACTCTTGTTACAGTGTTCATTGGTTATCTCAGGTCTTTGAGTTAATCCCT
TTTATCTTTTTACTTTTTCTTGTAGCAAAAATAGTTCATGATTTTCATTCAACACATTAGTAACTATGCATGGAAATTTCTTTAATAATTCTAAAGACATCCACAGG
AATCCAAGAAAGAGATTTCTGAAGAAACTAATAACATATTTTATTTAAGTCGTGGCTCATGATTTATATTCCCACATGCAACACTAACAAAATGATCCAACTATA
TAAGTTACCAGTTCTAGACGTGCAGGTTCCCAGCGGATTGGTGACTGAACTGGGGATCAGTGCGAACAAAGGGATCATTTACTCTTCCAAAGCAAGTCCTCCG
CCCGTCCAGAAGGCATATTTGGACCAATTTACAAAAGATTTTACCACATTTCTGAGGATTCATTCGGAAGAGTTGCTTTCAGGTGGCCGAATGCTCCTTACTTGC
ATTTGTAAAGGAGATGAATCCGATGGCCTGAATACCATAGACTTACTTGAGAGAGCAATAAACGACTTGGTTGTTGAGGTTATCATTTCTCTGTCTCTTTGATAA
TCAGATGCTCATTGCTTGTTATCTGAAATAAACTAGA

11	CCAAGGTGAAACCTGTCCTTGAA	**SEQ ID NO: 33**
12	CAACAAGTGCATTAAAGTTGCGG	**SEQ ID NO: 34**
13	AAAGAAAATGGACGCAAAATAGG	**SEQ ID NO: 35**
14	CCCGAGGAGTCCATGCATTTTTT	**SEQ ID NO: 36**

sgRNA target sequence

FIG. 7C

MXMT Cc00_g24720 - SEQ ID NO: 37

Cc00_g24720

GTGCGCTTTCTTTCTGACGAATTGACAGACTTTTCTACGCACGGAGGTAGCTGGCTAGCATACGCATCTATGAAATTTTCGCTACTTAAGCCCGAAATTTTGCAC
AATTAATCATTAACAGACACCTTCTTTAGCAGTCGCAATTCGATTGTCCTGCATATGAATGGAGCTCCAAGAAGTCCTGCATATGAATGAAGGTGAAGGCGATA
CAAGCTACGCCAAGAATGCATCCTACAATGTCTGTCTGTCTCTCTATCTCTCTTTAACACACACACACACAGAGAATAGTGGTAAATCATGCTATGATACGTCGA
TCTCTAACTTCACATTTGTATTTTGGACTGGTATGTGTAACAGCTGGCTCTTGCCAAGGTGAAACCT**TTCCTTGAACAATGCATACG**AGAATTGTTGCGGGCCAA
CTTGCCCAACAT**CAACAAGTGCATTAAAGTTG**CGGATTTGGGATGCGCTTCTGGACCAAACACACTTTTAACAGT**G**CGGGACATTGTGCAAAGTATTGACAAA
GTTGGCCAGGAAGAGAAGAATGAATTAGAACGTCCCACCATTCAGATTTTTCTGAATGATCTTTTCCAAAATGATTTCAATTCGGTTTTCAAGTTGCTGCCAAGC
TTCTACCGCAAACTCGAG**AAAGAAAATGGACGCAAGAT**AGGATCGTGCCTAATAAGCGCAATGCCTGGCTCTTTCTACGGCAGACTCTTC**CCCGAGGAGTCCA**
TGCATTTTTTGCACTCTTGTTACAGTGTTCATTGGTTATCTCAGGTCTTTGAGTTAATCCCTTTTATCTTTTTACTTTTTCTTGTAGCAAAAATGGTTCGTGATTTTC
ATTCAACACATTAGTAACTATGCATGGAAATTTCTTTAATAATTCTAAAGATATCCACAGGAATCCAAGAAAGAGATTTCTGAAGAAACTAATAACATATTTTAT
C**T**AAGTCGTGGCTCATGATTTACATTCCCACATGCAACACTAACAAAATGATCCAACTATATAAGTTACCAGTTCTGGACGTGCAGGTTCCCAGCGGTTTGGTGA
TTGAATTGGGGATTGGTGCAAACAAAGGGAGTATTTACTCTTCCAAAGGATGTCGTC

37	CCTTTCCTTGAACAATGCATACG	**SEQ ID NO: 38**
12	CAACAAGTGCATTAAAGTTGCGG	**SEQ ID NO: 39**
38	AAAGAAAATGGACGCAAGATAGG	**SEQ ID NO: 40**
14	CCCGAGGAGTCCATGCATTTTTT	**SEQ ID NO: 41**

sgRNA target sequence

FIG. 7D

XMT/MXMT/DXMT Cc09_g06950 - SEQ ID NO: 42

Cc09_g06950

TTTATCCCAATTGTGTGTGGTTCCCATTGGCTGTGCTCTTTCTCTCTGACCAATTGACAGATTTTTCTACGCACGTAGTTAGCCGGTTAGCATACGCATCTAAGAA
ATTTTCGCCATTTAAGTCCGAAATTTCGCACAGTTAATCATTAACAGACACCTTCCTTAGCAGTCCCAATTCGATTTATGTACAAGTCCTGCATATGAATGGAGCT
CCAAGAAGTCCTGCATATGAATGGAGGCGAAGGCGAAGCAAGCTACGCCAAGAATTCATCCTTCAATGTCTGTCTATCTGTCTATCTCTCTCTTTAACACACACA
CACACACACACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATCTCTAACTTAGTATGTCTTTTTTCGCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTAG
CAACTGGTTCTCGCCAAGGTGAAACCTGTCCTTGAACAATGCGTACGGGAATTGTTGCGGGCCAACTTGCCCAACATCAACAAGTGCATTAAAGTTGCAGATTT
GGGATGCGCTTCCGGACCAAACACACTTTTAACCGTTCGGGACACTGTACAAAGTATTGACAAAGTTAGGCAAGAAATGAAGAATGAATTAGAACGTCCCACC
ATTCAGGTTTTTCTGACTGATCTTTTCCAAAATGATTTCAATTCGGTTTTCATGCTGCTGCCAAGCTTCTACCGCAAACTTGAGAAAGAAAATGGACGCAAAATA
GGATCGTGCCTAATAGCCGCAATGCCTGGCTCTTTCCACGGCAGACTCTTCCCCGAGGAGTCCATGCATTTTTTACACTCTTCTTACAGTCTTCAGTTTTTATCCC
AGGTCTTTGAATTACTCCCTTTTATCTTTTTACTTTTTCTTGTAGCAAAAATAGTTCATGATTTTCATTCAACACATTAGTTACTATGCATGGAAATTTCTTTAATAA
TTCTCAAGATATCCACAGGAATCCAAGAAAGAGATTTCTAAAGGGAACCAGCTTTAGACTGCAGGTTCCCAGCGGTTTGGTGACTGAATTGGGGATCACTGCG
AACAAAAGGAGCATTTACTCTTCCAAAGCAAGTCCTCCGCCCGTCCAGAAGGCATATTTGGATCAATTTACGAAAGATTTTACCACATTTTTAAGGATGCGTTCG
GAAGAGTTGCTTTCACGTGGCCGAATGCTCCTTACTTGCATTTGTAAAGGAGATGAATGCGACGGCCCGAATACCATGGACTTACTTGAGATGGCAATAAACG
ACTTGGTTGTTGAGGTTAATCATTTCTCTGTCTCTTTGATGATCAGATGCTCATT

11	CCAAGGTGAAACCTGTCCTTGAA	**SEQ ID NO: 43**
13	AAAGAAAATGGACGCAAAATAGG	**SEQ ID NO: 44**
14	CCCGAGGAGTCCATGCATTTTTT	**SEQ ID NO: 45**

sgRNA target sequence

FIG. 7E

DXMT Cc01_g00720 - SEQ ID NO: 46

Cc01_g00720

AAAACAAACGAAAGTGACTTCATTATCTCTAACCTCCGATTTTTTATCATTAGTGGCTTGTTCCCATTGGCTGTGCGCTTCCTTTCTGACTAATTGATAGACTTTCTA
CGCACGTAGGTAGGCAGCTAGCATACGCATCTATGAAATTTTCGCTATTTAAGCCCGAAATTTCGCACAATTAATCATTAACAGATACCTTCTTTAGCAGTCCCA
ATTCGATTTATGCACACAAGTCCTGCGTATGAATGGAGCTCCAAGAAGTCCTGCATATGAATGGAGGCGAAGGCGATACAAGCTACGCCAAGAACTCATCCTACA
ATGTCTGTCTGTCTCTCTATCTCTCTCTTTAACACACACACACACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATCTCTAACTTAGTATGTCTTTTT
TCCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTTGCAGCTGTTTCTCATCAGGGTGAAACCTGTCCTTGAACAATGCATACAAGAATTGTTGCGGGCCAACT
TGCCCAACATCAACAAGTGCTTTAAAGTTGGGGATTTGGGATGCGCTTCTGGACCAAACACATTTTCAACAGTTCGGGACATTGTACAAAGTATTGACAAAGTT
GGCCAGGAAAAGAAGAATGAATTAGAACGTCCCACCATTCAGATTTTTTCTGAATGATCTTTTTCCAAAATGATTTCAATTCGGTTTTTCAAGTTGCTGCCAAGCTTC
TACCGCAATCTTGAG**AAAGAAAATGGACGCAAAAT**AGGATCGTGCCTGATAGGCGCAATGCCCGGCTCTTTCTACAGCAGACTCTTCCCC**GAGGAGTCCATG**
CATTTTTTACACTCTTGTTACTGTTTGCATTGGTTATCTCAGGTCTTTGAGTTAATCCCTTCTATCTTGTTTACTTTTTTCTTGTAGCAAAAATAAGTTCACGATTTTTT
ATTCAACACATTAGTAACTATGCATGGAAATTTCTTTAATAATTCTCAAGATATCCACAGGAATCCAAGAAAGAGATTTCTGACGAAACTAATAACACATTTTATT
TAATTCGTGGCTCATGATTTATATTCCCACATGCAACACTAACAAAATGATCCAACTATATAAGTTACCAGCTCTAGACGTGCAGGTTCCCAGCGGTTTGGTGAC
TGAATTGGGGATCAGTGTGAACAAAGGGTGCATTTACTCTTCCAAAGCAAGTCGTCCGCCCATCCAGAAGGCATATTTGGATCAATTTACGAAAGATTTTACCA
CATTTCTGA

13 AAAGAAAATGGACGCAAAATAGG **SEQ ID NO: 47**

14 CCCGAGGAGTCCATGCATTTTTT **SEQ ID NO: 48**

sgRNA target sequence

FIG. 8A

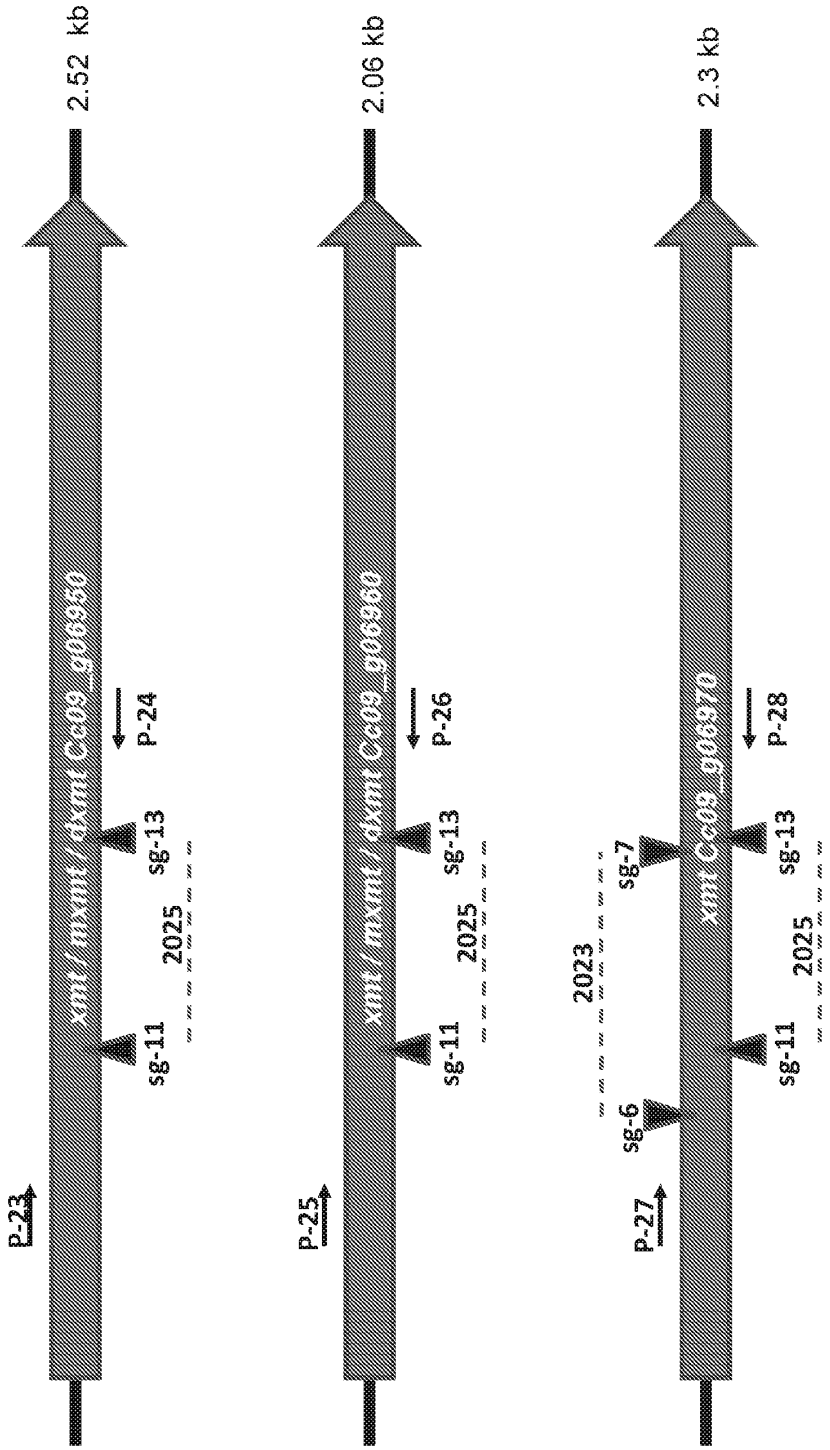
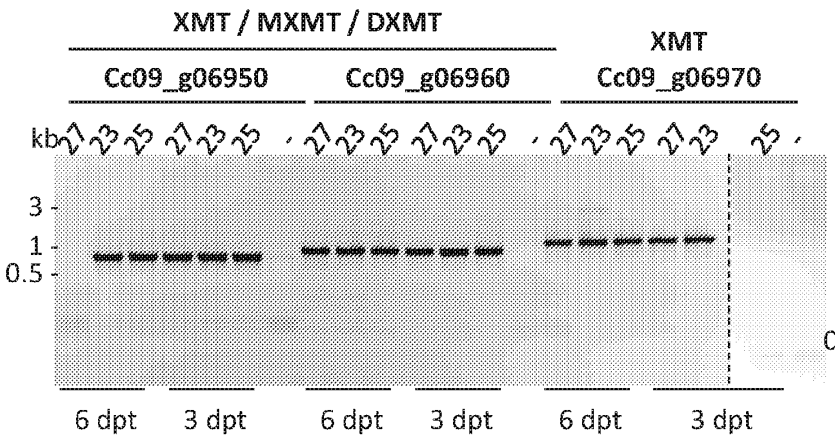
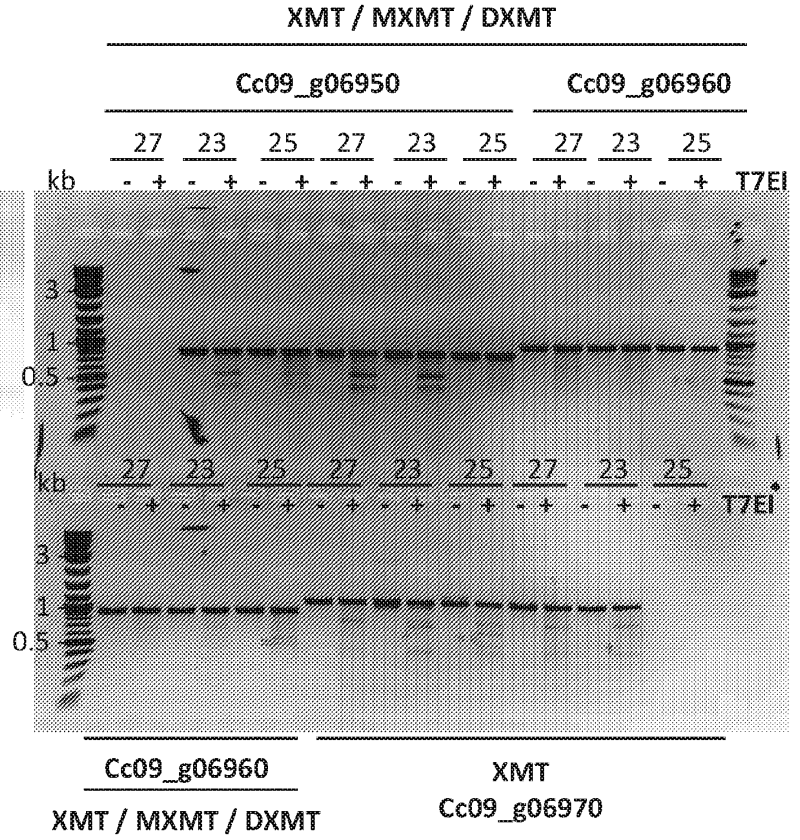

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2.06 kb
2.3 kb
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Xmil/mmil/dmil Cc09_g08980
Xmil Cc09_g08970
P-23
P-24
P-25
P-26
P-27
P-28
sg-11
sg-13
sg-6
sg-7
2025
2023

FIG. 8B



27: Control
23: sgRNA pair 1
25: sgRNA pair 2

FIG. 8C



* Evidence of GE events in T7
** Evidence of GE events through cloning, sequencing and T7 (see Figure 8D)

FIG. 8D

XMT / MXMT / DXMT *Cc09g06960*

2027 Ctrl - SEQ ID NO: 7
2023-1 - SEQ ID NO: 7
2023-2 SEQ ID NO: 7
2023-3 SEQ ID NO: 79
2023-4 SEQ ID NO: 7
2023-5 SEQ ID NO: 7
2023-6 SEQ ID NO: 80
2023-7 SEQ ID NO: 7

FIG. 8E

XMT *Cc09g06970*

2027 Ctrl - SEQ ID NO: 9
2023-1 - SEQ ID NO: 9
2023-2 SEQ ID NO: 81
2023-3 SEQ ID NO: 82
2023-4 SEQ ID NO: 83
2023-5 SEQ ID NO: 9
2023-6 SEQ ID NO: 84
2023-7 SEQ ID NO: 9

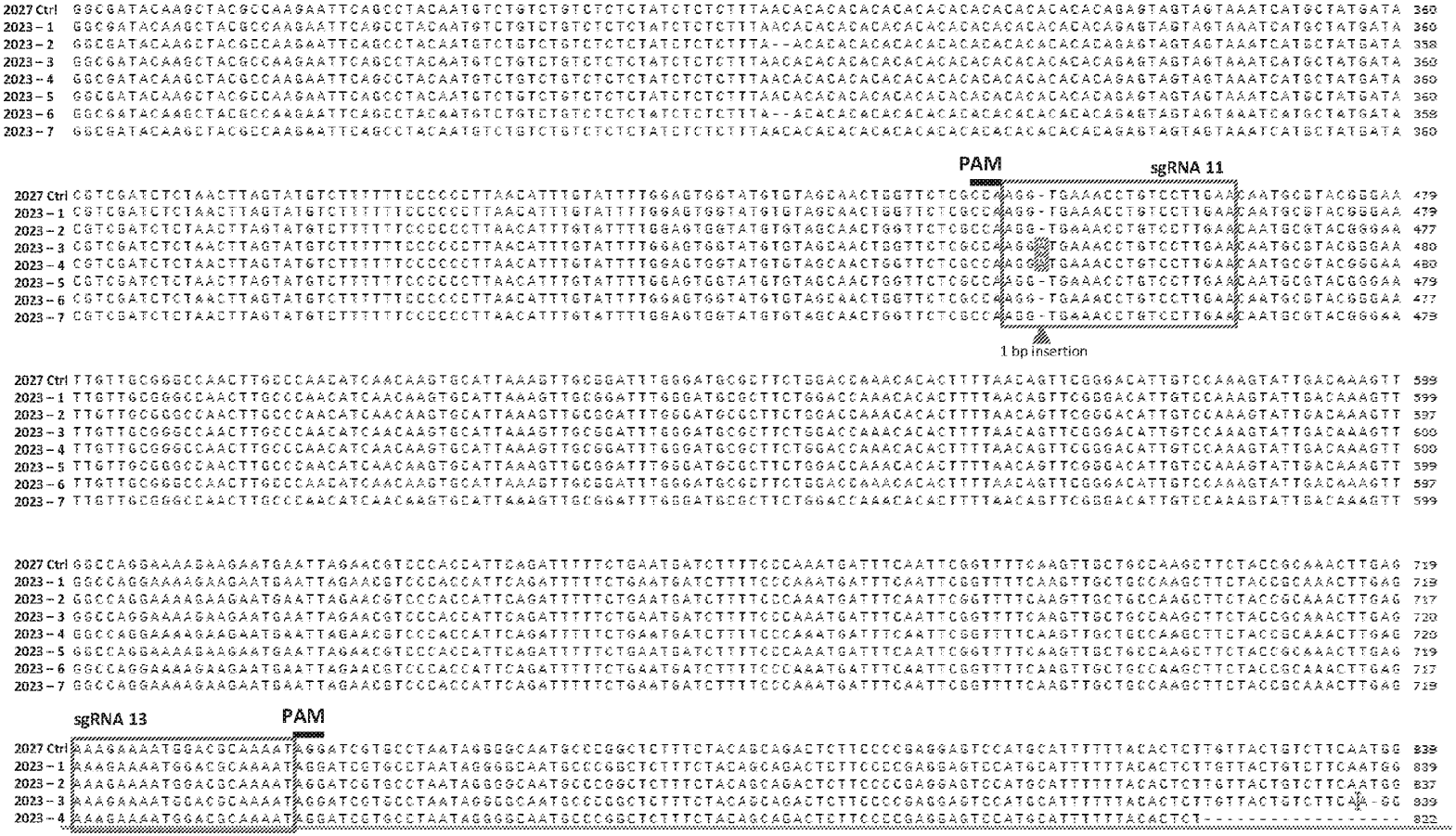


FIG. 8F

Cc09_g06950 - SEQ ID NO: 5
Cc09_g06950_2025 - SEQ ID NO: 85

XMT / MXMT / DXMT *Cc09g06950*

```
Cc09_g06950          CACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATTCTCTAACTTAGTATGTCTTTT
Cc09_g06950_2025     CACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATTCTCTAACTTAGTATGTCTTTT
                     ************************************************************

                                                                          PAM
Cc09_g06950          TTCGCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTACCAACTGGTTCTCGCCCAAGG
Cc09_g06950_2025     TTCGCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTACCAACTGGTTCTCGCCCAAGG
                     ************************************************************

                sgRNA-11
Cc09_g06950          GAAACTGTCCTTTGAACAATGCGTACGGGAATTGTTGCGGCCAACTTGCCCAACATCAA
Cc09_g06950_2025     ------------------------------------------------------------

Cc09_g06950          CAATGCATTAAAGTTGCAGATTTGGGATGCGCTTCCGGACCAAACACACTTTTAACCGT
Cc09_g06950_2025     ------------------------------------------------------------

Cc09_g06950          TCGGGACACTGTACAAACTATTGACAAAGTTAGGCAAGAAATGAAGAATGAATTAGAACG
Cc09_g06950_2025     ------------------------------------------------------------

Cc09_g06950          TCCCACCATTCAGGTTTTTCTGACTGATCTTTTCCAAAATGATTTCAATTCGGTTTTCAT
Cc09_g06950_2025     ------------------------------------------------------------

                                                 sgRNA-13     PAM
Cc09_g06950          GCTGCTGCCAAGCTTCTACCGCAAACTTGAGAAAAGAAATTGGACGCAAAATGGGATCGTG
Cc09_g06950_2025     ------------------------------------------------AATTGGATCGTG
                                                               **********

Cc09_g06950          CCTAATAGCCGCAATGCCTGGCTCTTTCCACGGCAGACTCTTCCCCAGGGAGTCCATGCA
Cc09_g06950_2025     CCTAATAGCCGCAATGCCTGGCTCTTTCCACGGCAGACTCTTCCCCAGGGAGTCCATGCA
                     ************************************************************
```

FIG. 8G

XMT *Cc09g06970*

Cc09_g06970 - SEQ ID NO: 9
Cc09_g06970_2025 - SEQ ID NO: 86

```
Cc09_g06970          ACACACACACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATCTCTAACTTAGTAT
Cc09_g06970-2025     ACACACACACACAGAGTAGTAGTAAATCATGCTATGATACGTCGATCTCTAACTTAGTAT
                     ************************************************************

Cc09_g06970          GTCTTTTTTCCCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTAGCAACTGGTTCTCG
Cc09_g06970-2025     GTCTTTTTTCCCCCCTTAACATTTGTATTTTGGAGTGGTATGTGTAGCAACTGGTTCTCG
                     ************************************************************
                     PAM       sgRNA-11
Cc09_g06970          CCAACGTCAAAACTTGTCATTGAACAATGCGTACGGGAATTGTTGCGGGCCAACTTGCCCA
Cc09_g06970-2025     CCAACG-----------------------------------------------------
                     ******

Cc09_g06970          ACATCAACAAGTGCATTAAAGTTGCGGATTTGGGATGCGCTTCTGGACCAAACACACTTT
Cc09_g06970-2025     ----------------------------TGGGATAC-CTTCTAG--------------T
                                                 ****** * ***** *             *

Cc09_g06970          TAACAGTTCGGGACATTGTCCAAAGTATTGACAAAGTTGGCCAGGAAAAGAAGAATGAAT
Cc09_g06970-2025     TAACA-------------------------------------------------------
                     *****

Cc09_g06970          TAGAACGTCCCACCATTCAGATTTTTCTGAATGATCTTTTCCCAAATGATTTCAATTCGG
Cc09_g06970-2025     -------GTCACACCATTC-------------ATGACATATCC-------------------
                            *** ********            ****  * * *
                                                          sgRNA-13      PAM
Cc09_g06970          TTTTCAAGTTGCTGCCAAGCTTCTACCGCAAACTTGAGAAAGAAAATGGACTCAAAATAG
Cc09_g06970-2025     ------------------------------------------ATGG-------AATAG
                                                               ****      *****

Cc09_g06970          GATCGTGCCTAATAGGGGCAATGCCCGGCTCTTTCTACAGCAGACTCTTCCCCGAGGAGT
Cc09_g06970-2025     GATCGTGCCTAATAGGGGCAATGCCCGGCTCTTTCTACAGCAGACTCTTCCCCGAGGAGT
                     ************************************************************

Cc09_g06970          CCATGCATTTTTTACACTCTTGTTACTGTCTTCAATGGTTATCTCAGGTCTTTGAGTTAA
Cc09_g06970-2025     CCATGCATTTTTTACACTCTTGTTACTGTCTTCAATGGTTATCTCAGGTCTTTGAGTTAA
                     ************************************************************
```

FIG. 9C

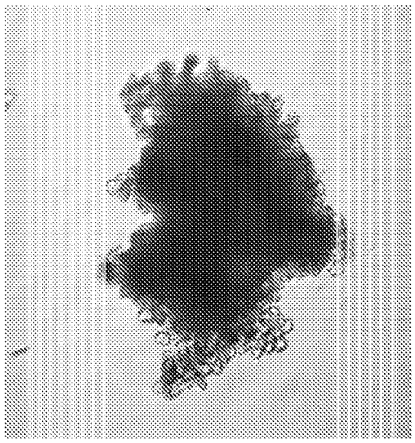


FIG. 9F

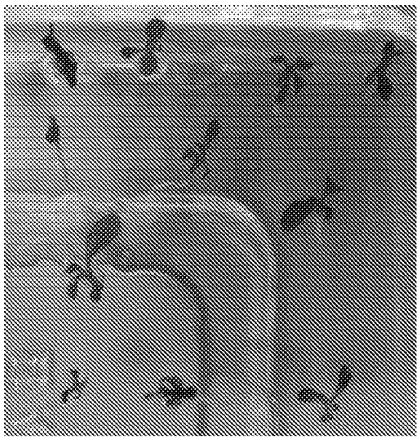


FIG. 9B

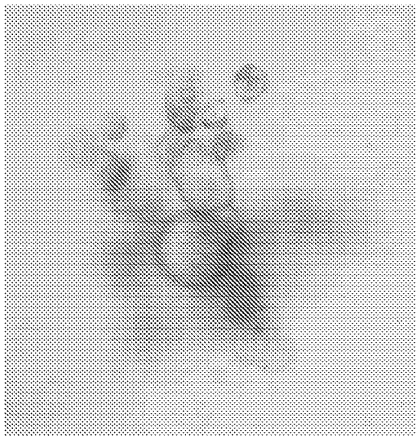


FIG. 9E



FIG. 9A

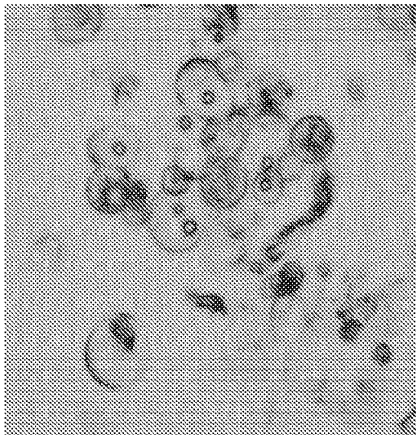


FIG. 9D

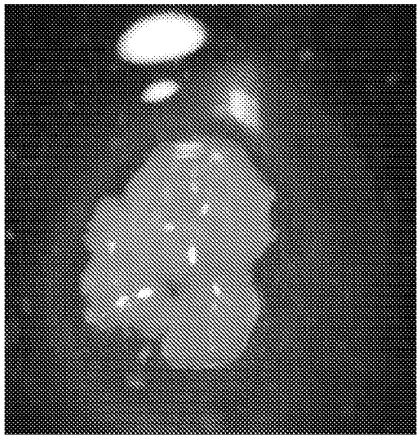


FIG. 10

Gene Name	Locus ID	sgRNAs
XMT	Cc09_g06970	1 – TTTGCACAATTAATCATTAAGGG (SEQ ID NO: 59)
		2 – CAAGAAGTCCTGCGGATGAATGG (SEQ ID NO: 60)
		3 – ACTTGTACATAAATCAAATTGGG (SEQ ID NO: 61)
		4 – CAAATTGGGACTGCCAAAGAAGG (SEQ ID NO: 62)
MXMT	Cc00_g24720	5 – GAAGTCCTGCATATGAATGAAGG (SEQ ID NO: 63)
		6 – GACGGGCGGACGACATCCTTTGG (SEQ ID NO: 64)
		7 – TTGGTGATTGAATTGGGGATTGG (SEQ ID NO: 65)
		8 – GGGAGTATTTACTCTTCCAAAGG (SEQ ID NO: 66)
DXMT	Cc01_g00720	9 – TCAACAAGTGCTTTAAAGTTGGG (SEQ ID NO: 67)
		10 – TGCTTTAAAGTTGGGGATTTGGG (SEQ ID NO: 68)
		11 – AAAATAGGATCGTGCCTGATAGG (SEQ ID NO: 69)
		12 – CGAACTGTTGAAAATGTGTTTGG (SEQ ID NO: 70)
XMT/MXMT/DXMT	Cc09_g06950	13 – CCTCGGGGAAGAGTCTGCCGTGG (SEQ ID NO: 71)
		14 – ACTTTGTACAGTGTCCCGAACGG (SEQ ID NO: 72)
		15 – ATTAGAACGTCCCACCATTCAGG (SEQ ID NO: 73)
		16 – ATGCGACGGCCCGAATACCATGG (SEQ ID NO: 74)
XMT/MXMT/DXMT	Cc09_g06960	17 – CATTCGGAAGAGTTGCTTTCAGG (SEQ ID NO: 75)
		18 – GTCTATGGTATTCAGGCCATCGG (SEQ ID NO: 76)
		19 – AGCGGATTGGTGACTGAACTGGG (SEQ ID NO: 77)
		20 – TCGGAAGAGTTGCTTTCAGGTGG (SEQ ID NO: 78)