

```
<?xml version="1.0" encoding="UTF-8"?>
<hgx xmlns="http://histogenetics.com/schema/hgx-1.0.1.xsd" version="1.0.1"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<project name="">
<reporting-center code="" />
<sample id="Sample ID 5" center-code="" receive-date="20190711">
<typing>
<interpretation date="20211110">
<haploid locus="A" method="SBT" type="01:BKKPM" allele-number="1" />
<haploid locus="A" method="SBT" type="02:BKSXH" allele-number="2" />
<haploid locus="B" method="SBT" type="35:02:01" allele-number="1" />
<haploid locus="B" method="SBT" type="35:BJSXZ" allele-number="2" />
<haploid locus="C" method="SBT" type="04:BMPZG" allele-number="1" />
<haploid locus="C" method="SBT" type="04:BMPZG" allele-number="2" />
<haploid locus="DRB1" method="SBT" type="11:04:01" allele-number="1" />
<haploid locus="DRB1" method="SBT" type="13:03:01" allele-number="2" />
<haploid locus="DRB3" method="SBT" type="01:01:02" allele-number="1" />
<haploid locus="DRB3" method="SBT" type="02:02:01" allele-number="2" />
<haploid locus="DRB4" method="SBT" type="NNNN" />
<haploid locus="DRB5" method="SBT" type="NNNN" />
<haploid locus="DQB1" method="SBT" type="03:BKHVH" allele-number="1" />
<haploid locus="DQB1" method="SBT" type="03:BKHVH" allele-number="2" />
<haploid locus="DPB1" method="SBT" type="03:BEPTE" allele-number="1" />
<haploid locus="DPB1" method="SBT" type="04:BKSZB" allele-number="2" />
<haploid locus="DQA1" method="SBT" type="05:EF" allele-number="1" />
<haploid locus="DQA1" method="SBT" type="05:XX" allele-number="2" />
<haploid locus="DPA1" method="SBT" type="01:AAC" allele-number="1" />
<haploid locus="DPA1" method="SBT" type="01:AAC" allele-number="2" />
<genotype-list>
<diploid-combination locus="A" technology="Illumina" db="HLADB" version="3.34.0">
<locus-block>
<allele-list allele-number="1">
<allele>01:01:01:01</allele>
<allele>01:01:01:02N</allele>
<allele>.....</allele>
<allele>.....</allele>
<allele>01:03:01:12</allele>
<allele>01:03:01:13</allele>
<allele>01:14</allele>
</allele-list>
</locus-block>
</diploid-combination>
</genotype-list>
</interpretation>
<hla locus="A">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="1" allele-number="1"
      continuity="false">ATGGCCGTATGGCGCCCCGAACCTCCTCCTGCTACTCTGGGGGCCCTGGCCCTGACCCAGACCTGGC
      GG</sbt>
<sbt method="SMS" segment="Exon" segment-number="1" allele-number="2"
      continuity="false">ATGGCCGTATGGCGCCCCGAACCTCGTCTGCTACTCTGGGGCTCTGGCCCTGACCCAGACCTGGC
      GG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
      continuity="false">GCTOCCACTCCATGAGGTATTCTTCACATCCGTGCCCCGGCCGCGGGGAGCCCCGCTTCA
      TGCGGCTACGTGGACGACACGCAGTTCTGCGGTTGACAGCGACGCCGAGCCAGAAGATGGAGCCGCGGGCGCCGTGGA
      TAGAGCAGGAGGGGCCGGAGTATTGGGACCAGGAGACACGGAATATGAAGGCCCACTCACAGACTGACCGAGCGAACCTGGG
      GACCCCTGCGCGGCTACTACAACCAGAGCGAGGACG</sbt>
```

```
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2"
continuity="false">GCTCTCACCCATGAGGTATTCTCACATCCGTCTCCGGCCGCCGGAGCCCCGCTTCATCGCA
GTGGGCTACGTGGACGACACGCAGTCGTGCGGTTGACAGCGACGCCCGAGCCAGAGGATGGAGCCGCGGGCGCCGTGGA
TAGAGCAGGAGGGTCCGGAGTATTGGGACGGGGAGACACGGAAAGTGAAGGCCACTCACAGACTCACCGAGTGGACCTGGG
GACCTGCGCGGCTACTACAACCAGAGCGAGGCCG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">GTTCTCACACCATCCAGATAATGTATGGCTGCGACGTGGGGCCGGACGGCGCTTCCTCCGCGGGTACCG
GCAGGACGCCAACGGCAAGGATTACATGCCCTGAACGAGGACCTGCGCTTGGACCCGGGACATGGCAGCTCAGA
TCACCAAGCGCAAGTGGGAGGCGGTCCATGCGGCGGAGCAGCGGAGAGTCTACCTGGAGGGCCGTGCGTGGACGGCTCCG
CAGATACCTGGAGAACGGGAAGGAGACGCTGCAGCGCACGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2"
continuity="false">GTTCTCACACCCTCCAGAGGATGTATGGCTGCGACGTGGGGCGGACTGGCGCTTCCTCCGCGGGTACCA
CCAGTACGCCAACGGCAAGGATTACATGCCCTGAACGAGGACCTGCGCTTGGACCCGGGACATGGCAGCTCAGA
CCACCAAGCACAAGTGGGAGGCGGCCATGCGGAGCAGTGGAGAGCCTACCTGGAGGGCACGTGCGTGGAGTGGCTCCG
CAGATACCTGGAGAACGGGAAGGAGACGCTGCAGCGCACGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="1"
continuity="false">ACCCCCCAAGACACATATGACCCACCACCCATCTGACCATGAGGCCACCTGAGGTGCTGGCCCTG
GGCTCTACCCCTGCGGAGATCACACTGACCTGGCAGCGGGATGGGGAGGACCAAGCCAGGACACGGAGCTCGTGGAGACCA
GGCCTGCAGGGGATGGAACCTCCAGAAGTGGGCGGCTGTGGTGGTGCCTCTGGAGAGGAGCAGAGATAACCTGCCATGTG
CAGCATGAGGGTCTGCCAACGGCCCTCACCTGAGATGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="2"
continuity="false">ACCCCCCAAGACACATATGACCTCACACCGCTGTCTGACCATGAAGCCACCTGAGGTGCTGGCCCTG
AGCTTCTACCCCTGCGGAGATCACACTGACCTGGCAGCGGGATGGGGAGGACCAAGCCAGGACACGGAGCTCGTGGAGACCA
GCCTGCAGGGGATGGAACCTCCAGAAGTGGGCGGCTGTGGTGGTGCCTCTGGACAGGAGCAGAGATAACCTGCCATGTG
AGCATGAGGGTTGGCCAAGGGCCCTCACCTGAGATGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2+3" allele-number="1"
continuity="false">AAGATGGAGCCGCGGGCGCCGTGGATAGAGCAGGAGGGCCGGAGTATTGGGACCCAGGAGACACGGA
ATATGAAGGCCACTCACAGACTGACCGAGCGAACCTGGGACCTGCGCGGCTACTACAACCAGAGCGAGGACGGTTCTCAC
ACCATCCAGATAATGTATGGCTGCGACGTGGGCGGGACGGCGCTTCCTCCGCGGGTACGGCAGGACGCCAACGGCAA
GGATTACATGCCCTGAACGAGGACCTGCGCTTGGACCCGGGCGGA</sbt>
<sbt method="SMS" segment="Exon" segment-number="2+3" allele-number="2"
continuity="false">AGGATGGAGCCGCGGGCGCCGTGGATAGAGCAGGAGGGTCCGGAGTATTGGGACGGGGAGACACGGA
AAGTGAAGGCCACTCACAGACTCACCGAGTGGACCTGGGACCTGCGCGGCTACTACAACCAGAGCGAGGCGGGTTCTCAC
ACCGTCCAGAGGATGTATGGCTGCGACGTGGGCGGACTGGCGCTTCCTCCGCGGGTACCCACAGTACGCCAACGGCAA
GGATTACATGCCCTGAAGAGGACCTGCGCTTGGACCCGGGCGGA</sbt>
</amplification>
</hla>
<hla locus="B">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
continuity="false">GCTCCCACCCATGAGGTATTCTACACCGCCATGCTCCGGCCGCCGGAGCCCCGCTTCATCGCA
GTGGGCTACGTGGACGACACCCAGTCGTGAGGTGACAGCGACGCCCGAGTCCGAGGAGCAGGGAGCCCCGGCCATGGAT
AGAGCAGGAGGGCCGGAGTATTGGGACCGGAACACACAGATCTCAAGACCAACACAGACTTACCGAGAGAGCCTGCGG
AACCTGCGCGGCTACTACAACCAGAGCGAGGCCG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2"
continuity="false">GCTCCCACCCATGAGGTATTCTACACCGCCATGCTCCGGCCGCCGGAGCCCCGCTTCATCGCA
GTGGGCTACGTGGACGACACCCAGTCGTGAGGTGACAGCGACGCCCGAGTCCGAGGAGCAGGGAGCCCCGGCCATGGAT
AGAGCAGGAGGGCCGGAGTATTGGGACCGGAACACACAGATCTCAAGACCAACACAGACTTACCGAGAGAGCCTGCGG
AACCTGCGCGGCTACTACAACCAGAGCGAGGCCG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">GGTCTCACATCACCGAGAGGATGTATGGCTGCGACCTGGGGCCGACGGGGCGCTTCCTCCGCGGGCATAA
CCAGTACGCCAACGGCAAGGATTACATGCCCTGAACGAGGACCTGAGCTGAGAGCCTACCTGGAGGGCGTGTGCGTGGAGTGGCTCCG
CAGATACCTGGAGAACGGGAAGGAGACGCTGCAGCGCGCG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2"
continuity="false">GGTCTCACATCACCGAGAGGATGTATGGCTGCGACCTGGGGCCGACGGGGCGCTTCCTCCGCGGGCATGA
CCAGTCCGCCAACGGCAAGGATTACATGCCCTGAACGAGGACCTGAGCTGAGAGCCTACCTGGAGGGCGTGTGCGTGGAGTGGCTCCG
```

CACCCAGCGCAAGGGGAGGCCCGTGTGGCGGAGCAGCTGAGAGCCTACCTGGAGGGCTGTGCCTGGAGTGGCTCCGC
AGATACTGGAGAACGGGAAGGAGACGCTGCAGCGCGCGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="1"
continuity="false">ACCCCCAAAGACACACGTGACCCACCACCCCGTCTGACCATGAGGCCACCTGAGGTGCTGGCCCTG
GGCTCTACCTCGGGAGATCACACTGACCTGGCAGCGGGATGGCGAGGACCAAACCTCAGGACACTGAGCTGTGGAGACCAG
ACCAGCAGGAGATAGAACCTTCAGAAGTGGCAGCTGTGGTGCCTCTGGAGAAGAGCAGAGATACACATGCCATGTAC
AGCATGAGGGCTGCCGAAGCCCTCACCTGAGATGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="2"
continuity="false">ACCCCCAAAGACACACGTGACCCACCACCCCGTCTGACCATGAGGCCACCTGAGGTGCTGGCCCTG
GGCTCTACCTCGGGAGATCACACTGACCTGGCAGCGGGATGGCGAGGACCAAACCTCAGGACACTGAGCTGTGGAGACCAG
ACCAGCAGGAGATAGAACCTTCAGAAGTGGCAGCTGTGGTGCCTCTGGAGAAGAGCAGAGATACACATGCCATGTAC
AGCATGAGGGCTGCCGAAGCCCTCACCTGAGATGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2+3" allele-number="1"
continuity="false">GTTGACAGCGACGCCCGAGTCCGAGGACGGAGCCCCGGCGCCATGGATAGAGCAGGAGGGCCGG
AGTATTGGGACCGAACACACAGATCTCAAGACCAACACACAGACTTACCGAGAGAGAGCCTGCGAACCTGCGCGGCTACTACA
ACCAGAGCGAGGCCGGTCTCACATCATCCAGAGGATGTATGGCTGCGACCTGGGCCCACGGCGCTCCCGCGGGCAT
AACCACTACGCCCTACGACGGCAAGGATTACATGCCCTGAACGAGGACCTGAGCTCTGGACCGCGGGAC</sbt>
<sbt method="SMS" segment="Exon" segment-number="2+3" allele-number="2"
continuity="false">GTTGACAGCGACGCCCGAGTCCGAGGACGGAGCCCCGGCGCCATGGATAGAGCAGGAGGGCCGG
AGTATTGGGACCGAACACACAGATCTCAAGACCAACACACAGACTTACCGAGAGAGAGCCTGCGAACCTGCGCGGCTACTACA
ACCAGAGCGAGGCCGGTCTCACATCATCCAGAGGATGTATGGCTGCGACCTGGGCCCACGGCGCTCCCGCGGGCAT
GACCAGTCCGCCTACGACGGCAAGGATTACATGCCCTGAACGAGGACCTGAGCTCTGGACCGCGGGAC</sbt>
</amplification>
</hla>
<hla locus="C">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
continuity="false">GCTCCCACCTCCATGAGGTATTCACATCGTGTCTGGCCCGCCGGAGGCCGCTTCATCGCA
GTGGGCTACGTGGACGACACGCAGTCCGTCGCGGTCGACAGCGACGCCCGAGTCCAAGAGGGAGCCGCGGGAGCCGTGG
TGGAGCAGGAGGGCCGGAGTATTGGGACCGGGAGACACAGAAGTACAAGCGCCAGGCACAGGCTGACCGAGTGAACCTGC
GGAAACTGCGCGGCTACTACAACCAGAGCGAGGACG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">GGTCTCACCCCTCCAGAGGATGTTGGCTGCGACCTGGGCGGAGGGCGCTCCCGCGGGTATAA
CCAGTTCGCCTACGACGGCAAGGATTACATGCCCTGAACGAGGATCTGCGCTCTGGACCGCCCGGACACGGCGGCTCAGAT
CACCCAGCGCAAGTGGGAGGCCCGTGAGGCGGAGCAGCGGAGAGCCTACCTGGAGGGCACGTGCGTGGAGTGGCTCCGC
AGATACTGGAGAACGGGAAGGAGACGCTGCAGCGCGCG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="1"
continuity="false">AACCCCCAAAGACACACGTGACCCACCACCCCGTCTGACCATGAGGCCACCTGAGGTGCTGGCCCTG
GGCTCTACCTCGGGAGATCACACTGACCTGGCAGTGGGAGGGAGACCAAACCTCAGGACACCGAGCTGTGGAGACCAG
GCCAGCAGGAGATGGAACCTTCAGAAGTGGCAGCTGTGGTGCCTCTGGAGAAGAGCAGAGATACACGTGCCATGTT
AGCACGAGGGCTGCCGAAGCCCTCACCTGAGATGGA</sbt>
<sbt method="SMS" segment="Exon" segment-number="7" allele-number="1"
continuity="false">CCAGCAACAGTGCCAGGGCTCTGATGAGTCTCTCATCGCTTGTAAAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2+3" allele-number="1"
continuity="false">AGGAGGGCCGGAGTATTGGGACCGGGAGACACAGAAGTACAAGCGCCAGGCACAGGCTGACCGAGTG
AACCTGCGGAAACTGCGCGCTACTACAACCAGAGCGAGGACGGGCTCACACCCCTCCAGAGGATGTTGGCTGCGACCTGGG
GCCGGACGGCGCCTCCCGCGGGTATAACCAGTTCGCCTACGACGGCAAGGATTACATGCCCTGAACGAGGATCT</sbt>
</amplification>
</hla>
<hla locus="DRB1">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
continuity="false">CACGTTCTGGAGTACTCTACGTCTGAGTGTCTTCAATGGGACGGAGCGGGTGCCTGGAC
AGATACTTCTATAACCAAGAGGAGTACGTGCGCTCGACAGCGACGTGGGGAGTTCCGGCGGTGACGGAGTGGGGCGGC
CTGATGAGGAGTACTGGAACAGCCAGAAGGACTTCTGGAGAAGACAGGCGGGCGCGTGGACACCTACTGCAGACACA
GGGTTGGAGAGCTCACAGTGCAGCGCGAG</sbt>

```
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2"
continuity="false">CACGTTCTGGAGTACTCTACGTCTGAGTGTCAATTCTCAATGGGACGGAGCGGGTGCCTGGAC
AGATACTTCTATAACCAAGAGGAGTACGTGCGCTTCGACAGCGACGTGGGGAGTACCGGGCGGTGACGGAGCTGGGGCGGC
CTAGCGCCGAGTACTGGAACAGCCAGAAGGACATCCTGGAAAGACAAGCGGGCCGCGGTGGACACCTACTGCAGACACAAC
GGGGTTGGTGGAGAGCTTCACGGTGAGCGCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">TCCATCCTAACGGTGAATGTGTATCCTCAAAGACCCAGCCCCCTGCAGCACCACAACCTCTGGTCTGTTCTG
TGAGTGGTTCTATCCAGGCAGCATTGAAGTCAGGTGGTCCCGAATGCCAGGAAGAGAAGACTGGGGTGGTCCACAGGC
CTGATCCACAATGGAGACTGGACCTCCAGACCTGGTATGCTGGAAACAGTCTCGGAGTGGAGAGGTTACACCTGCCAA
GTGGAGCACCCAAGCGTACAAGCCCTCACAGTGGAAATGGA</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2"
continuity="false">TCCATCCTAACGGTGAATGTGTATCCTCAAAGACCCAGCCCCCTGCAGCACCACAACCTCTGGTCTGTTCTG
TGAGTGGTTCTATCCAGGCAGCATTGAAGTCAGGTGGTCCCGAATGCCAGGAAGAGAAGACTGGGGTGGTCCACAGGC
CTGATCCACAATGGAGACTGGACCTCCAGACCTGGTATGCTGGAAACAGTCTCGGAGTGGAGAGGTTACACCTGCCAA
GTGGAGCACCCAAGCGTACAAGCCCTCACAGTGGAAATGGA</sbt>
</amplification>
</hla>
<hla locus="DRB3">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
continuity="false">CACGTTCTGGAGCTCGTAAGTCTGAGTGTCAATTCTCAATGGGACGGAGCGGGTGCCTGGTACCTGGAA
CAGATACTCCATAACCAGGAGGAGTCTCGCTCGACAGCGACGTGGGGAGTACCGGGCGGTGACGGAGCTGGGGCGGC
CTGTCGCCGAGTCCTGGAAACAGCCAGAAGGACCTCTGGAGCAGAAGCGGGGCCGGTGGACAATTACTGCAGACACAAC
GGGGTTGGTGGAGAGCTTCACAGTGCAGCGCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2"
continuity="false">CACGTTCTGGAGCTCTAACGGAGTACGCGCGCTTCGACAGCGACGTGGGGAGTACCGGGCGGTGAGGGAGCTGGGGCGGC
CTGATGCCGAGTACTGGAACAGCCAGAAGGACCTCTGGAGCAGAAGCGGGGCCAGGTGGACAATTACTGCAGACACAAC
GGGGTTGGTGGAGAGCTTCACAGTGCAGCGCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">TCCATCCTCAGGTGAATGTGTATCCTGCAAAGACCCAGCCCCCTGCAGCACCACAACCTCTGGTCTGCTCTG
TGAGTGGTTCTATCCAGGCAGCATTGAAGTCAGGTGGTCCCGAACGCCAGGAAGAGAAGGCTGGGGTGGTCCACAGGGC
CTGATCCAGAACATGGAGACTGGACCTCCAGACCTGGTATGCTAGAAACAGTCTCGGAGTGGAGAGGTTACACCTGCCAA
GTGGAGCACCCAAGCGTAACGAGCGCTCACAGTGGAAATGGA</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2"
continuity="false">TCCATCCTCAGGTGAATGTGTATCCTGCAAAGACCCAGCCCCCTGCAGCACCACAACCTCTGGTCTGCTCTG
TGAGTGGTTCTATCCAGGCAGCATTGAAGTCAGGTGGTCCCGAACGCCAGGAAGAGAAGGCTGGGGTGGTCCACAGGGC
CTGATCCAGAACATGGAGACTGGACCTCCAGACCTGGTATGCTAGAAACAGTCTCGGAGTGGAGAGGTTACACCTGCCAA
GTGGAGCACCCAAGCGTAACGAGCGCTCACAGTGGAAATGGA</sbt>
</amplification>
</hla>
<hla locus="DQB1">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"
continuity="false">AGGATTCGTGTACCAAGTTAACGGCATGTGCTACTCACCAACGGGACGGAGCGCGTGCCTATGTGACC
AGATACTTCTATAACCGAGAGGAGTACGCACGCTTCGACAGCGACGTGGAGGTGACCGGGCGGTGACGCCGCTGGGGCGGC
TGACGCCGAGTACTGGAACAGCCAGAAGGAAGTCTGGAGAGGACCCGGAGTGGACACGGTGTGAGACACAAC
CAGTTGGAGCTCCGACGACCTTGAGCGCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"
continuity="false">TGGAGCCCACAGTGACCATCTCCCATCCAGGACAGAGGCCCTCAACCACCAACCTGCTGGTCTGCTCA
GTGACAGATTCATCCAGCCAGATCAAAGTCCGGTGGTTCTGGAAATGACCGAGGAGGACAACGGCGTGTGTCACAC
CTTATTAGGAACGGTGAACGGACCTCCAGATCTGGTATGCTGGAAATGACTCCCCAGCATGGAGACGTACACCTGCCACG
TGGAGCACCCCAGCCTCCAGAACCCATACCGTGAGTGGC</sbt>
</amplification>
</hla>
<hla locus="DPB1">
<amplification>
```

```
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1">
continuity="false">AGAATTACGTGTACAGTTACGGCAGGAATGCTACCGCTTAAATGGGACACAGCGCTTCCTGGAA
GAGATACATCTACAACCGGGAGGGAGTTCGCGCTTCGACAGCGACGTGGGGAGTTCCGGCGGTGACGGAGCTGGGGCGG
CCTGATGAGGACTACTGGAACAGCCAGAAGGACCTCTGGAGGAAGCAGGGCAGTGCCGACAGGGTATGCAGACACAAC
ACGAGCTGGACGAGGCCGTGACCCCTGCAGCGCCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2">
continuity="false">AGAATTACCTTTCCAGGGACGGCAGGAATGCTACCGCTTAAATGGGACACAGCGCTTCCTGGAGAGATA
CATCTACAACCGGGAGGGAGTTCGCGCTTCGACAGCGACGTGGGGAGTTCCGGCGGTGACGGAGCTGGGGCGGCTGCT
GCGGAGTACTGGAACAGCCAGAAGGACATCCTGGAGGAAGCAGGGCAGTGCCGACAGGATGTGCAGACACAACACTACGAGC
TGGGCGGGCCATGACCTGCAGCGCCGAG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1">
continuity="false">CCTCCAAGAAGGGGCCCTGCAGCACCAACCTGCTTGCTGCCACGTGACAGATTCTACCCAGGCAGC
ATTCAAGTCCGATGGTCTGAATGGACAGGAGAACAGCTGGGTCTGTCACCAACCTGATCCGTAAATGGAGACTGGGACC
TTCCAGATCCTGGTATGCTGGAAATGACCCCCCAGCAGGGAGACGTCTACATGCCAAGTGGAGCACACCAGCCTGGACAGT
CCTGTCACC</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2">
continuity="false">CCTCCAAGAAGGGGCCCTGCAGCACCAACCTGCTTGCTGCCACGTGACGGATTCTACCCAGGCAGC
ATTCAAGTCCGATGGTCTGAATGGACAGGAGAACAGCTGGGTCTGTCACCAACCTGATCCGTAAATGGAGACTGGGACC
TTCCAGATCCTGGTATGCTGGAAATGACCCCCCAGCAGGGAGATGTCTACACCTGCCAAGTGGAGCACACCAGCCTGGATAGT
CCTGTCACC</sbt>
</amplification>
</hla>
<hla locus="DQA1">
<amplification>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1">
continuity="false">CTGACCACGTGCGCTCTTATGGTGTAAACTGTACCGTCTACGGCCCTCTGGCCAGTACACCCATGAAT
TTGATGGAGATGAGCAGTTCTACGTGGACCTGGGAGGAAGGAGACTGTCTGGTGTGCTGCTCAGACAATTAGATTG
ACCCGCAATTGCACTGACAAACATCGCTGCTAAAACATAACTGAACAGTCTGATTAAACGCTCAACTCTACCGCTGCTACC
AATG</sbt>
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="2">
continuity="false">CTGACCACGTGCGCTCTTATGGTGTAAACTGTACCGTCTACGGCCCTCTGGCCAGTACACCCATGAAT
TTGATGGAGATGAGCAGTTCTACGTGGACCTGGGAGGAAGGAGACTGTCTGGTGTGCTGCTCAGACAATTAGATTG
ACCCGCAATTGCACTGACAAACATCGCTGCTAAAACATAACTGAACAGTCTGATTAAACGCTCAACTCTACCGCTGCTACC
AATG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1">
continuity="false">AGGTTCTGAGGTACAGTGTGTTCCAAGTCTCCCGTGACACTGGTCAGCCAAACATCCTCATCTGCTTG
TGGACAACATCTTCTCTGTGGTCAACATCACATGGCTGAGCAATGGCACTCAGTCACAGAAGGTGTTCTGAGACCAGCTT
CCTCTCCAAGAGTGATCATTCTCTCAAGATCAGTTACCTCACCTCCCTCTGCTGAGGAGAGTTATGACTGCAAGGTGG
AGCACTGGGACTGGACAAGCCTCTGAAACACTGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="2">
continuity="false">AGGTTCTGAGGTACAGTGTGTTCCAAGTCTCCCGTGACACTGGTCAGCCAAACATCCTCATCTGCTTG
TGGACAACATCTTCTCTGTGGTCAACATCACATGGCTGAGCAATGGCACTCAGTCACAGAAGGTGTTCTGAGACCAGCTT
CCTCTCCAAGAGTGATCATTCTCTCAAGATCAGTTACCTCACCTCCCTCTGCTGATGAGATTATGACTGCAAGGTGG
AGCACTGGGACTGGACAAGCCTCTGAAACACTGGG</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="1">
continuity="false">AGCCTGAGATTCCAGCCCTATGTCAGAGCTCACAGAGACTGTGGCTGCGCCCTGGGTTGTCTGTTG
CCTCGTGGGCATTGTGGTGGGACTGTCTCATCGAGGCCCTGCGTCAGTTGGTGTCCAGACACCCAAGGGCCCTGTGA
</sbt>
<sbt method="SMS" segment="Exon" segment-number="4" allele-number="2">
continuity="false">AGCCTGAGATTCCAGCCCTATGTCAGAGCTCACAGAGACTGTGGCTGCGCCCTGGGTTGTCTGTTG
CCTCGTGGGCATTGTGGTGGGACTGTCTCATCGAGGCCCTGCGTCAGTTGGTGTCCAGACACCCAAGGGCCCTGTGA
</sbt>
</amplification>
</hla>
<hla locus="DPA1">
<amplification>
```

```
<sbt method="SMS" segment="Exon" segment-number="2" allele-number="1"  
continuity="false">CGGACCATGTGTCACTTATGCCGCGTTGTACAGACGCATAAGCCAACAGGGGAGTTATGTTGAATT  
GATGAAGATGAGATGTTCTATGTGGATCTGGACAAGAAGGAGACCGCTGGCATCTGGAGGAGTTGGCCAAGCCTTCCTT  
GAGGCTCAGGGCGGGCTGGCTAACATTGCTATATTGAACAACAACCTGATCCAGCGTCAACCACACTCAGGCCA  
CCAACG</sbt>  
<sbt method="SMS" segment="Exon" segment-number="3" allele-number="1"  
continuity="false">ATCCCCCTGAGGTGACCGTGTGTTCCCAAGGAGCCTGTGGAGCTGGGCCAGCCAAACACCCCTCATCTGCCAC  
ATTGACAAGTTCTCCCACCAGTGCTAACGTACGTGGCTGTGCAACGGGAGCTGGTCACTGAGGGTGTGCTGAGAGCCTC  
TTCCTGCCAGAACAGATTACAGCTTCCACAAGTCCATTACCTGACCTTGTGCCCTCAGCAGAGGACTTCTATGACTGCAGGGT  
GGAGCACTGGGGCTTGGACCAGCCGCTCTCAAGCACTGGG</sbt>  
</amplification>  
</hla>  
</typing>  
</sample>  
</project>  
</hgx>
```