Prof. Gifford Office Hours
After Lecture, M F
Polymerase Chain Reaction (PCR)

Denature: 94°C - 30 secs

Anneal: 50-60°C - 30 secs

Extend: 72°C - 1-4 mins

Temp depends on primers

Need Taq polymerase, dNTPs, buffer
FBI’s Combined DNA Index System - CODIS

13 CODIS Core STR Loci with Chromosomal Positions

Bob Blackett’s STR CODIS profile

<table>
<thead>
<tr>
<th>Locus</th>
<th>D3S1358</th>
<th>vWA</th>
<th>FGA</th>
<th>D8S1179</th>
<th>D21S11</th>
<th>D18S51</th>
<th>D5S818</th>
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<tbody>
<tr>
<td>Genotype</td>
<td>15, 18</td>
<td>16, 16</td>
<td>19, 24</td>
<td>12, 13</td>
<td>29, 31</td>
<td>12, 13</td>
<td>11, 13</td>
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<tr>
<td>Frequency</td>
<td>8.2%</td>
<td>4.4%</td>
<td>1.7%</td>
<td>9.9%</td>
<td>2.3%</td>
<td>4.3%</td>
<td>13%</td>
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<tr>
<th>Locus</th>
<th>D13S317</th>
<th>D7S820</th>
<th>D16S539</th>
<th>D18S51</th>
<th>THO 1</th>
<th>TPOX</th>
<th>THO 1</th>
<th>TPOX</th>
<th>CSF1PO</th>
<th>AMEL</th>
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<td>Genotype</td>
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<td>10, 10</td>
<td>11, 11</td>
<td>9, 9.3</td>
<td>8, 8</td>
<td>11, 11</td>
<td>X Y</td>
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<td></td>
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<tr>
<td>Frequency</td>
<td>1.2%</td>
<td>6.3%</td>
<td>9.5%</td>
<td>9.6%</td>
<td>3.52%</td>
<td>7.2%</td>
<td>(Male)</td>
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Terms

- Recombinant DNA
- Cloning
- Clonal
- Insert
- Vector
- Plasmid
- Restriction enzyme
- Library
- Ligase
- Palindromic sequence
- Sticky ends
- Origin of replication
- Cloning site
- Selectable marker
- Transformation
- Selection
- Gel
- Restriction map
- Bacterial colony
- Reporter gene
- cDNA
- Reverse transcriptase
- Polymerase Chain Reaction (PCR)
- Short tandem repeat (STR)