Patient report

Bio-Rad DATE: 08/07/2008
D-10 TIME: 12:13 PM
S/N: #DB7G153204 Software version: 3.50-A1
Sample ID: RACK03-6-46-23-7-2008
Injection date 07/23/2008 06:59 PM
Injection #: 46 Method: HbA2/F
Rack #: 03 Rack position: 6

Peak table - ID: RACK03-6-46-23-7-2008

<table>
<thead>
<tr>
<th>Peak</th>
<th>R.time</th>
<th>Height</th>
<th>Area</th>
<th>Area %</th>
</tr>
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<tbody>
<tr>
<td>A1a</td>
<td>0.20</td>
<td>6724</td>
<td>39956</td>
<td>1.8</td>
</tr>
<tr>
<td>A1b</td>
<td>0.28</td>
<td>7162</td>
<td>25501</td>
<td>1.2</td>
</tr>
<tr>
<td>F</td>
<td>0.41</td>
<td>2103</td>
<td>12119</td>
<td>&lt; 0.8 *</td>
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<tr>
<td>LA1c/CHb-1</td>
<td>0.66</td>
<td>2657</td>
<td>17989</td>
<td>0.8</td>
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<tr>
<td>A1c</td>
<td>0.79</td>
<td>7307</td>
<td>92005</td>
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<td>P3</td>
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<td>10261</td>
<td>106699</td>
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<td>A0</td>
<td>1.69</td>
<td>313016</td>
<td>1821381</td>
<td>84.1</td>
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<tr>
<td>A2</td>
<td>3.10</td>
<td>2739</td>
<td>49962</td>
<td>2.7</td>
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<tr>
<td>Total Area:</td>
<td></td>
<td></td>
<td>2165612</td>
<td></td>
</tr>
</tbody>
</table>

Concentration:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% F</td>
<td>&lt; 0.8 *</td>
</tr>
<tr>
<td>% A1c</td>
<td>5.6</td>
</tr>
<tr>
<td>% A2</td>
<td>2.7</td>
</tr>
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</table>
The chromatogram and data in this case report are actual laboratory findings. Bio-Rad Laboratories, Inc. does not validate or confirm the sample data included in this database. All information contained herein is for informational use only and is not meant as a definitive identification of hemoglobin genotype.

Hb Name: Valletta
Genotype: ACA --> CCA
Hb Class: Beta Variant

Sample Hematology Data
Hb (g/dL): 14.7
RBC (M/mL): 5.2 x 10^12
MCV (fL): 77.6
MCH (pg): 28.4

Iron Status
Ferritin: 198

Major abnormal property: Stability Normal
Laboratory Findings: 21.171% Beta Valletta Globin chain

Electrophoresis: CHROMATOGRAPHY The betaX chain elutes ahead of betaA in reversed phase HPLC

Characterization: STRUCTURE STUDIES Tryptic digestion; separation of peptides by reversed phase HPLC; amino acid analysis DNA ANALYSES An ACA->CCA mutation at codon 87

OCCURRENCE: Found in many Maltese newborn babies and their parents, and also in some Italian newborn babies
OTHER INFORMATION: Ratio of Hb Valletta to Hb A in the newborn is 50:50; the Hb Valletta mutation occurs linked to the Hb F-Malta-1 mutation (i.e. CAT->CGT) at codon 117 of the Ggamma gene (the two mutations are 27-28 kb apart)

Patient general data
Ethnicity: Maltese
Gender: Male
Age: 35
Transfused patient: No


Ref Lab: Director: Professor Alex. E. Felice. Thalassaemia Clinic, and, Laboratory of Molecular Genetics Department of Physiology & Biochemistry, BioMedical Sciences Building, University of Malta, Msida; And, Section of Molecular Genetics, Division of Pathology, Mater Dei Hospital, MALTA, MSD2080; tel: 356 2340 2774, Fax: 356 2134 3535

Reference Laboratory:
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University of Malta and Section of Molecular Genetics Division of Pathology
Mater Dei Hospital, Malta

Bio-rad Comments:
Hb Valletta beta 87(F3) Thr>Pro. Elutes as Hb A°. Clinically normal. Abnormal chain could be observed by RP HPLC. This mutation is usually linked in cis to Hb F Malta.