Cardiac troponin I (cTnI) is a cardiac muscle protein with a molecular weight of 22,500 Dalton. In the cardiac muscle, troponin I (TnI) forms a troponin complex together with troponin T (TnT) and troponin C (TnC), which plays a very essential role for the transmission of the intracellular calcium signal of the actin-myosin interaction. Troponin I is quickly released in the blood 2 hours after the onset of an AMI (acute myocardium infarct) and its level remains increased for several days.

Sample Material
For testing 100 µl of whole blood or plasma samples are taken with qualified collection tubes containing heparin-Na, heparin-Li and EDTA.

Reference Range
Mean value < 0.02 ng/ml
Max. < 0.02 ng/ml
99 % value < 0.02 ng/ml
in 363 healthy individuals

Specific Performance Data
1. Test measuring range: 0.02 – 50 ng/ml
2. Method comparison (plasma samples):
   
   \[ y = 0.37x - 0.007; \quad r = 0.975; \quad n = 80 \]

   (y: this method; x: Dade Behring Stratus® CS cTnI).

Further method comparisons on request.

Test Principle
3. **Correlation between whole blood and plasma:**

\[ y = 1.00x + 0.01; \quad r = 0.999, \quad n = 91 \]

(y: whole blood, x: plasma)

4. **Standardization:**

The calibrators for PATHFAST® cTnl can be traced back to the NIST standard Reference Material for Human Cardiac Troponin Complex SRM 2921 by the National Institute of Standard and Technology in the USA, which has certified concentration for human cardiac troponin I.

5. **Detection Limit:**

0.02 ng/ml

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<table>
<thead>
<tr>
<th>Measuring range</th>
<th>Precision</th>
<th>Overall precision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>Mean value (ng/ml)</td>
<td>S.D. (ng/ml)</td>
</tr>
<tr>
<td>QC-L</td>
<td>0.09</td>
<td>0.003</td>
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<tr>
<td>QC-MD</td>
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<td>QC-H</td>
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</tbody>
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**Literature**

