Restriction Endonuclease \textit{Pvu} I

\textbf{From Proteus vulgaris}

\begin{tabular}{ll}
\textbf{Cat. No. 10 650 137 001} & 100 units (5 U/\mu l) \\
\textbf{Cat. No. 10 650 129 001} & 500 units (5 U/\mu l) \\
\end{tabular}

\textbf{Stability/Storage} The undiluted enzyme solution is stable when stored at -15 to -25°C until the control date printed on the label. Do not store below -25°C to avoid freezing.

\textbf{Note:} Product is shipped on dry ice.

\textbf{Sequence specificity} \textit{Pvu} I recognizes the sequence CGAT/CG and generates fragments with 3’-cohesive termini (1).

\textbf{Compatible ends} \textit{Pvu} I generates compatible ends to \textit{Pac} I.

\textbf{Enzyme with compatible ends} Recognition sequence New sequence if \textit{Pvu} I is ligated to enzyme with compatible ends

<table>
<thead>
<tr>
<th>Enzyme</th>
<th>Recognition sequence</th>
<th>New sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{Pvu} I</td>
<td>CGAT/CG</td>
<td>CGAT/CG</td>
</tr>
</tbody>
</table>

\textbf{Isoschizomers} \textit{Pvu} I is an isoschizomer to \textit{Bsp} I and \textit{Xcr} II.

\textbf{Methylation sensitivity} \textit{Pvu} I cutting is not inhibited by overlapping dam-methylation (\textit{*}), but \textit{Pvu} I fragments of DNA isolated from dam⁺-strains are not as readily re-ligated as those isolated from dam⁻-strains. \textit{Pvu} I is inhibited by 5-methylcytosine as indicated (*) and by 4-methylcytosine.

\textbf{Storage buffer} 20 mM Tris-HCl, 300 mM KCl, 1 mM EDTA, 1 mM Dithioerythritol, 0.05% Polyolectanol (v/v), 50% Glycerol (v/v), pH approx. 7.9 (at 4°C).

\textbf{Incubation buffer, (10×, included)} 0.5 M Tris-HCl, 1 M NaCl, 100 mM MgCl₂, 10 mM Dithioerythritol, pH 7.5 (at 37°C) (= SuRE/Cut Buffer H).

\textbf{Activity in SuRE/Cut Buffer System} Bold face printed buffer indicates the recommended buffer for optimal activity:

<table>
<thead>
<tr>
<th>Buffer</th>
<th>A</th>
<th>B</th>
<th>L</th>
<th>M</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-75%</td>
<td>75-100%</td>
<td>25-50%</td>
<td>50-75%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

\textbf{Incubation temperature} 37°C

\textbf{Unit definition} One Unit is the enzyme activity that completely cleaves 1 \mu g DNA in 1 h at 37°C in the SuRE/Cut Buffer H in a total volume of 25 \mu l.

\textbf{Typical experiment} Component Final concentration

<table>
<thead>
<tr>
<th>Component</th>
<th>Final concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA</td>
<td>1 \mu g</td>
</tr>
<tr>
<td>10 × SuRE/Cut Buffer H</td>
<td>2.5 \mu l</td>
</tr>
<tr>
<td>Sterile redist. water</td>
<td>Up to a total volume of 25 \mu l</td>
</tr>
<tr>
<td>Restriction enzyme</td>
<td>1 unit</td>
</tr>
<tr>
<td>Incubate at 37°C for 1 h.</td>
<td></td>
</tr>
</tbody>
</table>

\textbf{Heat Inactivation} \textit{Pvu} I is not heat-inactivated by 15 min incubation at 65°C.

\textbf{References}
3. Rebase The Restriction Enzyme Database: http://rebase.neb.com
Ordering Information

Roche Applied Science offers a large selection of reagents and systems for life science research. For a complete overview of related products and manuals, please visit and bookmark our home page, www.roche-applied-science.com, and our Special Interest Sites, including Mapping & Cloning.

The convenient RE Finder Program located on our BenchMate website, http://www.roche-applied-science.com/benchmate helps you identify the enzymes that will cut your DNA sequence, and displays the names and recognition sequences of enzymes and isoschizomers as well as links to detailed information (e.g. instructions for use) of the selected restriction enzyme.

Printed Materials

You can view the following manuals on our website:

- Lab FAQ’s “Find a Quick Solution”
- Restriction Enzyme Ordering Guide
- Molecular Weight Markers for Nucleic Acids

Changes to previous version

Update of quality control.

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