HiDi DNA polymerase

#9001
Store at -20°C.

Contents
HiDi (High Discrimination) DNA polymerase, 5 U/µl
HiDi reaction buffer, 10x

Description
HiDi DNA polymerase is a highly selective DNA polymerase variant, specially evolved for all assays in which High Discrimination is required, for instance in allele-specific PCRs, primer extensions or methylation-specific PCRs. An aptamer-based hot-start formulation of the HiDi DNA polymerase prevents false amplification. Temperatures above 50°-55°C cause the aptamer's secondary structure to melt and will set-free the polymerase.

HiDi DNA polymerase efficiently amplifies from primers that are matched at the 3'-end and discriminates primers that are mismatched.

Applications
- SNP-detection by allele-specific amplification (ASA) / Allele-specific PCR
- Methylation specific PCR (MSP)
- HLA genotyping
- Multiplex PCR

Recommendations for PCR/ Reaction Setup

<table>
<thead>
<tr>
<th>PCR Mix</th>
<th>Volume</th>
<th>Final concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer forward (10 µM)*</td>
<td>1 µl</td>
<td>0.2 µM (0.05-1 µM)</td>
</tr>
<tr>
<td>Primer reverse (10 µM)*</td>
<td>1 µl</td>
<td>0.2 µM (0.05-1 µM)</td>
</tr>
<tr>
<td>dNTPs (2 mM)</td>
<td>5 µl</td>
<td>200 µM</td>
</tr>
<tr>
<td>HiDi buffer (10x)</td>
<td>5 µl</td>
<td>1x</td>
</tr>
<tr>
<td>HiDi DNA polymerase 5 U/µl</td>
<td>0.5 µl</td>
<td>2.5 U/reaction</td>
</tr>
<tr>
<td>Template/Sample extract</td>
<td>x µl</td>
<td>up to 50µl total vol.</td>
</tr>
<tr>
<td>Nuclease-free water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Primers should ideally have a GC content of 40-60% typically

Important notes
- Keep all components on ice.
- Spin down and mix all solutions carefully before use.
- HiDi 10x buffer is optimized for short amplicon length (about 200 bp, but also longer amplicon lengths are possible. The addition of additional Magnesium (+ 0.5 - 1.5 mM) might be needed in case of longer amplicons >500 bp.
- HiDi DNA polymerase can also be used for real-time cycling, when adding a suitable real-time PCR.
- Please note, that HiDi polymerase is a nuclease deficient DNA-polymerase, not suitable for probe-based assays. In this case HiDiTaq DNA polymerase (#9201) is recommended.

References
HiDi DNA polymerase is based on:

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Product source: recombinant protein expression in E.coli.