**Redmond Red**

<table>
<thead>
<tr>
<th>Category</th>
<th>Fluorescent Dyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modification Code</td>
<td>RedR</td>
</tr>
<tr>
<td>Reference Catalog Number</td>
<td>26-6991</td>
</tr>
<tr>
<td>5 Prime</td>
<td>Y</td>
</tr>
<tr>
<td>3 Prime</td>
<td>Y</td>
</tr>
<tr>
<td>Internal</td>
<td>Y</td>
</tr>
<tr>
<td>Molecular Weight(mw)</td>
<td>445.34</td>
</tr>
</tbody>
</table>

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The Epoch dyes add to the portfolio of the increasing availability of numerous fluorescent dyes covering the visible spectra that suitable for incorporation in oligonucleotides. Redmond Red is an alternate for Cy3.5 fluorophore

Single-dye labeled oligonucleotides are routinely used for PCR for fragment analysis, DNA sequencing and FISH analysis. Dual-dye labeled oligos are particularly useful in fluorescence resonance energy transfer (FRET) experiments for determination of intra- and intermolecular distances at very high resolution (1-10 nm). In addition, dual-labeled oligos containing fluorescent dye/dark quencher pairs are now routinely used in quantitative and qualitative real-time PCR experiments and assays (5'-nuclease assay, Molecular Beacon, Scorpions, etc. Details of how such dual-labeled probes work for detection of minute amounts of target are found in the Quenchers modifications category.

Fluorophores can be used to label DNA oligos for use as hybridization probes in a variety of in vivo and in vitro research or diagnostic applications, as well as for structure-function studies of DNA, RNA, and protein-oligonucleotide complexes. Fluorescent modifications can also be combined with non-fluorescent modifications in a wide variety of combinations for use in highly specializing applications or research projects.

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