**Fluorocillin™ Green β-Lactamase Substrates**

**Quick Facts**

*Storage upon receipt:*
- ≤–20°C
- Desiccate
- Protect from light

*Ex/Em:* 345/530 nm (precipitating substrate) and 495/525 nm (soluble substrate)

**Introduction**

Fluorocillin™ Green 345/530 β-lactamase substrate was developed as a precipitating dye generally compatible with a variety of β-lactamase enzymes and corresponding antibody conjugates. Scientists at Molecular Probes have demonstrated the utility of this reagent in immunohistochemistry applications, and it may also prove useful as a marker for endogenous β-lactamase activity in prokaryotes, possibly detected by microscopy or even flow cytometry. It is important to note, however, that in its precipitated form, Fluorocillin™ Green 345/530 β-lactamase substrate produces a crystal size incompatible with immunocytochemical analysis. This form of β-lactamase substrate (F33951) is not compatible with TEM-1 β-lactamase and its conjugates, but can, for example, be cleaved by P99 β-lactamase.

For the TEM-1 β-lactamase and conjugates of that enzyme, Molecular Probes has developed the Fluorocillin™ Green 495/525 β-lactamase substrate (F33952), which produces a soluble product. Molecular Probes SensiFlex™ ELISA Development Kits (S33853, S33854) and β-lactamase conjugates (G31567, G31568, and S31569) are examples of products that are compatible with this form of the Fluorocillin™ Green reagent, and we have found this to be a very sensitive, robust substrate for ELISA protocols.

**Storage and Handling:**

Upon receipt, Fluorocillin™ Green β-lactamase substrates should be stored at ≤–20°C, desiccated, and protected from light until required for use. If stored properly, the compounds should be stable for at least 6 months. Please allow the contents to warm to room temperature before opening vials.

Both forms of Fluorocillin™ Green reagent are moisture sensitive and are packaged with desiccant. Once a vial of the Fluorocillin™ Green reagent is opened and the contents dissolved in DMSO (we recommend the use of high-quality, anhydrous DMSO), the reagent should be divided into aliquots promptly and frozen if not used immediately. Avoid repeatedly freezing and thawing the DMSO stocks. Protect the Fluorocillin™ Green reagent (and reactions containing diluted forms of it) from light.

**Application**

Since the applications of Fluorocillin™ Green β-lactamase substrates are varied, researchers should consult the primary literature for protocol information. In general, both Fluorocillin™ Green β-lactamase substrates (F33951 and F33952) are recommended for use at ~1–10 µM. Additional information for use of the soluble substrate (F33952) can be found in the Product Information Sheet for the SensiFlex™ ELISA Development Kits (available from Molecular Probes at probes.invitrogen.com).

**Product List**

Current prices may be obtained from our Web site or from our Customer Service Department.

<table>
<thead>
<tr>
<th>Cat #</th>
<th>Product Name</th>
<th>Unit Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>F33951</td>
<td>Fluorocillin™ Green 345/530 β-lactamase substrate <em>precipitating product</em></td>
<td>5 mg</td>
</tr>
<tr>
<td>F33952</td>
<td>Fluorocillin™ Green 495/525 β-lactamase substrate <em>soluble product</em></td>
<td>5 x 100 µg</td>
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</table>
Contact Information

Further information on Molecular Probes products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Paisley, United Kingdom. All others should contact our Technical Service Department in Eugene, Oregon.

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