Creatinine Assay Kit ab65340 provides an accurate, convenient measure of creatinine concentration in biological fluids such as serum, urine or CSF.

In the creatinine assay protocol, creatinine is converted to creatine by creatininase, creatine is converted to sarcosine, which is specifically oxidized to produce a product which reacts with a probe to generate red color (λmax = 570 nm) and fluorescence (Ex/Em = 538/587 nm).

Unlike picric acid assays, this kit is suitable for serum creatinine determinations, as well as for urine and other biological samples.

Creatinine assay protocol summary:
- add samples and standards to wells
- add reaction mix and incubate for 60 min at 37°C
- analyze with microplate reader

For deproteinization of samples: Better results are typically seen with this assay when using a 10kda filter for sample deproteinization than when using the PCA method.

This product is manufactured by BioVision, an Abcam company and was previously called K625 Creatinine Colorimetric/Fluorometric Assay Kit. K625-100 is the same size as the 100 test size of ab65340.
Creatinine, or creatine anhydride, is a breakdown product of creatine phosphate in muscle. The loss of water molecule from creatine results in the formation of creatinine. Creatinine is transferred to the kidneys by blood plasma, whereupon it is eliminated from the body by glomerular filtration and partial tubular excretion. Creatinine is usually produced and excreted at a fairly constant rate, and blood creatinine is used to determine glomerular filtration rate (GFR), a measure of kidney function.

<table>
<thead>
<tr>
<th>Components</th>
<th>100 tests</th>
<th>2000 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assay Buffer II</td>
<td>1 x 25ml</td>
<td>20 x 25ml</td>
</tr>
<tr>
<td>Creatinase</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>Creatininase</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>Sarcosine Enzyme Mix</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>Creatinine Standard</td>
<td>1 vial</td>
<td>20 vials</td>
</tr>
<tr>
<td>OxiRed™ Probe</td>
<td>1 x 200µl</td>
<td>20 x 200µl</td>
</tr>
</tbody>
</table>

Mice were injected i.p. with 6-ECDCA before I/R injury. At 24 h after I/R, kidney, serum and urine samples were collected for measurements of creatinine in serum with ab65340.
Standard curve: mean of duplicates (+/- SD) with background reads subtracted
Creatinine measured in mouse and human serum plotted against RFU. Samples were diluted 5-10 fold.

Creatinine measured in mouse and human urine plotted against RFU. Samples were diluted 400-800 fold.
Creatinine levels in filtered human urine was measured in the presence or absence of creatininase (background signal subtracted).

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