**Overview**

**Product name**
Beta Lactamase Activity Assay Kit (Colorimetric)

**Detection method**
Colorimetric

**Sample type**
Saliva, Urine, Serum, Other biological fluids

**Assay type**
Enzyme activity

**Sensitivity**
0.06 mU/well

**Species reactivity**
Reacts with: Other species, Mammals

**Product overview**

Beta Lactamase Activity Assay Kit (Colorimetric) (ab197008) is a simple and sensitive assay that can detect and quantify the enzymatic activity of beta lactamases, a large family of hydrolases. The assay is based on the hydrolysis of the substrate Nitrocefin, a chromogenic cephalosporin, that results in the generation of a colored product (detectable at OD=490 nm), which is directly proportional to the amount of beta-lactamase activity.

This product can detect as low as 0.06 mU of beta-lactamase activity from bacterial samples or from biological fluids infected with beta-lactamase expressing bacteria.

**Notes**

Beta Lactamases (β-Lactamases, βLs), are a large family of hydrolases comprising more than 850 identified members expressed in Gram-positive and Gram-negative bacteria. βLs can be classified according to their substrate or inhibitor specificity. These enzymes are capable of hydrolyzing four atom rings known as β-lactams. Antibiotics containing β-lactam rings (i.e. penicillin, cephalosporin, monobactam, carbapenem) are highly susceptible to be hydrolyzed via enzymatic activity, which deactivates their antibiotic potency. βLs have become a significant clinical threat due to the alarming number of cases of bacterial strains showing β-lactam antibiotic resistance.

**Platform**
Microplate

**Properties**

**Storage instructions**
Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta Lactamase Assay Buffer</td>
<td>1 x 27ml</td>
</tr>
</tbody>
</table>
**Components**

<table>
<thead>
<tr>
<th></th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta Lactamase Hydrolysis Buffer</td>
<td>1 x 100µl</td>
</tr>
<tr>
<td>Nitrocefin</td>
<td>1 x 220µl</td>
</tr>
<tr>
<td>Positive Control</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

**Images**

- **Nitrocefin Standard Curve.**

- **Beta-Lactamase Activity.**

- **Beta-Lactamase Activity of E. coli and contaminated media expressed per milligram of protein.**

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"
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