3-Nitrotyrosine ELISA Kit ab116691

Product Overview

**Product name**
3-Nitrotyrosine ELISA Kit

**Detection method**
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-assay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td>6.9%</td>
</tr>
<tr>
<td>Inter-assay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>13%</td>
</tr>
</tbody>
</table>

**Sample type**
Cell culture extracts, Tissue Extracts

**Assay type**
Sandwich (quantitative)

**Sensitivity**
8 ng/ml

**Range**
8 ng/ml - 1000 ng/ml

**Assay duration**
Multiple steps standard assay

**Product overview**
ab116691 is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of 3-nitrotyrosine in cell and tissue lysates. The assay employs an antibody specific for 3-nitrotyrosine coated on a 96-well plate. Standards and samples are pipetted into the wells and 3-nitrotyrosine present in the sample is bound to the wells by the immobilized antibody. The wells are washed and a biotin labeled anti-3-nitrotyrosine detector antibody is added. After washing away unbound detector antibody, HRP-conjugated streptavidin specific for the biotin labeled detector antibody is pipetted into the wells. The wells are again washed, an HRP substrate solution (TMB) is added to the wells and color develops in proportion to the amount of 3-nitrotyrosine bound. The developing blue color is measured at 600 nm. Optionally the reaction can be stopped by adding hydrochloric acid which changes the color from blue to yellow and the intensity can be measured at 450 nm.

**Notes**
Store all components at 4°C. This kit is stable for 6 months from receipt. After reconstitution the standard should be stored at -80°C. Unused microplate strips should be returned to the pouch containing the desiccant and resealed.
Storage instructions  
Store at +4°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X 3-nitrotyrosine Detector Antibody</td>
<td>1 x 1ml</td>
</tr>
<tr>
<td>10X Blocking Buffer</td>
<td>1 x 6ml</td>
</tr>
<tr>
<td>10X HRP Label</td>
<td>1 x 1ml</td>
</tr>
<tr>
<td>20X Buffer</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>3-nitrotyrosine BSA standard (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>Extraction Buffer (ab260490)</td>
<td>1 x 15ml</td>
</tr>
<tr>
<td>Microplate 96 antibody coated wells in 12 strips</td>
<td>1 unit</td>
</tr>
<tr>
<td>HRP Development Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

Relevance  
The cellular production of highly reactive nitrogen species derived from nitric oxide, such as peroxynitrite, nitrogen dioxide and nitryl chloride, leads to the nitration of tyrosine residues in tissue proteins. The extent of protein nitrotyrosine formation provides an index of the production of reactive nitrogen species and potential cell damage over a period of time. Nitrotyrosine can be measured by amino-acid analysis of protein hydrolysates and detected, estimated semi-quantitatively and located in cells and tissues by immunocytochemical techniques using antibodies directed against the nitrotyrosine hapten.

Properties

Relevance

Example standard curve.

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