**Product name**
Protein Carbonyl Content Assay Kit

**Detection method**
Colorimetric

**Assay type**
Quantitative

**Sensitivity**
0.015 µM

**Assay time**
1h 30m

**Product overview**
Protein Carbonyl Content Assay Kit ab126287 is designed to provide a simple and accurate method of quantifying carbonyls in protein samples.

The protein carbonyl assay protocol is based on the reaction of DNPH with protein carbonyls. This is the most popular assay type for measuring protein carbonyl content. DNP hydrazones formed in this reaction are easily quantifiable at 375 nm absorbance.

When used with, for example a 1 mg (~15 nmol) sample, this protein carbonyl assay protocol has a detection limit of about 0.15 nmol carbonyl. For context, BSA typically contains approximately 1-3 nmol carbonyl/mg.

Protein carbonyl assay protocol summary:
- add DNPH to samples and incubate for 10 min
- add TCA to samples, incubate for 5 min, spin for 2 min, and discard supernatant
- wash pellet by sonicating in acetone, spin and remove acetone, repeat acetone wash step
- add Guanidine solution and resolubilize pellet, and transfer to plate
- analyze with a microplate reader to measure protein carbonyl content, also perform a protein assay (eg. BCA assay) on samples to establish protein concentration

**Notes**

**Related products**
This is the most popular Protein Carbonyl Content assay kit. Other assays include:
- Protein Carbonyl Content Assay (Fluorometric) ab235631
- Protein Carbonyl Content ELISA (DNPH) ab238536
- Protein Carbonyl Content Western Blot Assay ab178020

Review the oxidative stress marker and assay guide, or the full metabolism assay guide to learn about more assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also how to assay metabolic function in live cells using your plate reader.
Platform
Microplate reader

Properties

Storage instructions
Store at +4°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Streptozocin Solution</td>
<td>Blue</td>
<td>1 x 1ml</td>
</tr>
<tr>
<td>87% TCA Solution</td>
<td>NM</td>
<td>1 x 3ml</td>
</tr>
<tr>
<td>6 M Guanidine Solution</td>
<td>WM</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>96-Well Clear Plate</td>
<td></td>
<td>1 unit</td>
</tr>
<tr>
<td>DNPH Solution</td>
<td>Amber</td>
<td>1 x 11ml</td>
</tr>
</tbody>
</table>

Images

Typical Standard Curve using BCA Protein Quantification Assay (ab102536)

Functional Studies - Protein Carbonyl Content Assay Kit (ab126287)
Representative Data Obtained Using the Protein Carbonyl Content Assay Kit

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