AGE (Advanced Glycation End) Assay Kit ab238539

Overview

Product name: AGE (Advanced Glycation End) Assay Kit
Detection method: Colorimetric
Sample type: Serum, Plasma, Cell Lysate, Purified protein, Tissue Lysate
Assay type: Competitive
Sensitivity: 0.5 µg/ml
Range: 0.36 µg/ml - 100 µg/ml

Product overview:
AGE (Advanced Glycation End Products) Assay Kit (ab238539) is designed for the rapid detection and quantitation of advanced glycation end product protein adducts.

Advanced Glycation End Products (AGE) are formed during the Maillard reaction where reducing carbohydrates react with lysine side chains and N-terminal amino groups of various macromolecules, particularly proteins. The advanced glycation end products can adversely affect the function of these macromolecules. One of the most prevalent advanced glycation end products, N-epsilon-(Carboxymethyl) Lysine, has been implicated in oxidative stress and vascular damage. The quantity of AGE adduct in protein samples is determined by comparing its OD with that of a known AGE-BSA standard curve.

Platform:
Microplate reader

Properties

Storage instructions: Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>100X Conjugate Diluent</td>
<td>1 x 300µl</td>
</tr>
<tr>
<td>10X Wash Buffer</td>
<td>1 x 100ml</td>
</tr>
<tr>
<td>AGE Conjugate</td>
<td>1 x 50µl</td>
</tr>
<tr>
<td>AGE-BSA Standard</td>
<td>1 x 125µl</td>
</tr>
<tr>
<td>Anti-AGE Antibody (1000X)</td>
<td>1 x 10µl</td>
</tr>
</tbody>
</table>
The non enzymatic reaction of reducing carbohydrates with lysine side chains and N terminal amino groups of macromolecules (amino acids, proteins, phospholipids and nucleic acids) is called the Maillard reaction or glycation. The latter products of this process, termed advanced glycation end products (AGEs), adversely affect the functional properties of proteins, lipids and DNA. In long lived tissue proteins, these chemical modifications accumulate with age and may contribute to the pathophysiology of ageing and long term complications of diabetes, atherosclerosis and renal failure.

### Relevance

<table>
<thead>
<tr>
<th>Components</th>
<th>96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assay Diluent</td>
<td>1 x 50ml</td>
</tr>
<tr>
<td>Protein Binding Strip Well Plate</td>
<td>1 unit</td>
</tr>
<tr>
<td>Secondary Antibody, HRP Conjugate (1000X)</td>
<td>1 x 20µl</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>Substrate Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

### Cellular localization

Cell Membrane and Secreted

### Images

Typical AGE Competitive ELISA results.

This data is for reference only and should not be used to interpret actual results.

Example AGE-BSA Competitive ELISA Standard Curve.
Advanced Glycation End Product Formation Pathways.

CML = N-epsilon-(carboxymethyl)lysine.
GOLD = glyoxal-derived lysine dimer.
CEL = N-epsilon-(1-carboxyethyl)lysine.
MOLD = methylglyoxal-derived lysine dimer.
DOLD = 3-deoxyglucosone-derived lysine dimer.
3-DG = 3-deoxyglucosone.

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