Product name: Monoamine Oxidase (MAO) Assay Kit
Detection method: Fluorescent
Sample type: Serum, Plasma

Product overview:
Monoamine Oxidase (MAO) Assay Kit (ab241031) is a sensitive assay to detect total monoamine oxidase activity as well as MAO-A and MAO-B isoenzyme activities separately in the presence of Clorgyline and Selegiline - specific inhibitors for MAO-A and MAO-B, respectively. The assay is based on the fluorometric detection of H$_2$O$_2$, one of the by-products generated during the oxidative deamination of the MAO substrate (Tyramine). The assay can detect as little as 5 µU of MAO enzymatic activity.

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

Components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>H$_2$O$_2$ Standard (0.88 M)</td>
<td>1 x 100µl</td>
</tr>
<tr>
<td>MAO Assay Buffer</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>MAO Substrate (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>MAO-A Inhibitor, Clorgyline (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>MAO-B Inhibitor, Selegiline (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>Positive Control (MAO-A Enzyme) (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>Probe (in DMSO)</td>
<td>1 x 220µl</td>
</tr>
</tbody>
</table>

Relevance:
Monoamine oxidases are enzymes that catalyze the oxidation of monoamines. They belong to the protein family of flavin containing amine oxidoreductases. In humans there are two types of MAO: MAO-A and MAO-B. Both are found in neurons and astroglia. Outside the central nervous system: MAO-A is also found in the liver, gastrointestinal tract and placenta. MAO-B is mostly found in
blood platelets. Because of the vital role that MAOs play in the inactivation of neurotransmitters, MAO dysfunction (too much/too little MAO activity) is thought to be responsible for a number of neurological disorders.

**Cellular localization**
Mitochondrion outer membrane; Single-pass type IV membrane protein; Cytoplasmic side.

**Images**

H$_2$O$_2$ Standard Curve.

MAO-T, MAO-A and MAO-B activities in mouse brain lysate (2.5 µg).

Specific activities of MAO-A and MAO-B. Assays were performed following the kit protocols.
Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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