**Oxalate Assay Kit (Colorimetric) ab196990**

**Overview**

- **Product name**: Oxalate Assay Kit (Colorimetric)
- **Detection method**: Colorimetric
- **Sample type**: Urine, Serum, Plasma, Tissue
- **Assay type**: Quantitative
- **Sensitivity**: < 20 µM
- **Assay time**: 2h 20m
- **Species reactivity**: Reacts with: Other species, Mammals

**Product overview**

Oxalate Assay Kit (Colorimetric) (ab196990) is an easy-to-use, sensitive and high throughput adaptable kit. In this assay, Oxalate reacts with oxalate converter and oxalate enzyme mix to form an intermediate that reacts in turn with a highly specific probe to generate color that can be detected at OD=450 nm.

This product can detect Oxalate levels lower than 20 µM.

**Oxalate assay protocol summary:**
- add samples and standards to wells
- add oxalate convertor and incubate for 1 hr
- add reaction mix and incubate for 1 hr
- analyze with microplate reader

**Notes**

Oxalate (C₂O₄²⁻), in the form of Oxalic acid is present in many foods and beverages (e.g. spinach, tea etc.). It accumulates in many plant tissues and play role in regulating pH, osmosis and calcium storage. In animals, oxalate is either absorbed from dietary intake or produced from glycolate metabolism in liver. Under normal conditions, the daily oxalate load can be excreted by kidney. However, hereditary defects can cause an increased level of oxalate, which leads to hyperoxaluria and results in the formation of kidney stones. Therefore, measurement of oxalate level is useful for the prevention, diagnosis and monitoring of kidney stones.

**Platform**

Microplate reader

**Storage instructions**

Store at -20°C. Please refer to protocols.
8 weeks old mice were placed for 10 weeks on special egg-white based diets: HPC diet (High phosphate and calcium diet; 20% lactate, 2% calcium, 1.25% phosphate); HP diet (High phosphate diet; 0.6% calcium, 1.20% phosphate); CO diet (Control diet; 0.6% calcium, 0.3% phosphate); WT: wild type; Npt2a: Npt2a-/- mice. Oxylate was measured using 196990.

### Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalate Assay Buffer</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>Oxalate Converter</td>
<td>1 x 0.2ml</td>
</tr>
<tr>
<td>Oxalate Development Buffer</td>
<td>1 x 15ml</td>
</tr>
<tr>
<td>Oxalate Enzyme Mix</td>
<td>1 vial</td>
</tr>
<tr>
<td>Oxalate Probe</td>
<td>1 vial</td>
</tr>
<tr>
<td>Oxalate Standard</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

### Example data

Oxalate concentration in normal human urine (3 donors, 10 μL sample), normal human serum (10 μL), Kiwi lysate (10 μL) and Spinach lysate (10 μL).
Oxalate Standard Curve.

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