**Product datasheet**

**HMG-CoA Reductase Activity Assay Kit (Colorimetric) ab204701**

1 References 2 Images

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**Overview**

| Product name | HMG-CoA Reductase Activity Assay Kit (Colorimetric) |
|Detection method| Colorimetric|
|Sample type| Purified protein|
|Assay type| Enzyme activity|
|Assay time| 0h 10m|

**Product overview**

HMG-CoA Reductase Activity Assay Kit (Colorimetric) (ab204701) is suitable for measuring activity of purified HMG-CoA reductase or for screening inhibitors/activators of HMG-CoA reductase. It is based on the consumption of NADPH by the enzyme, which can be measured by the decrease of absorbance at OD=340 nm. The limit of detection is below 0.05 mU.

**Notes**

HMG-CoA reductase (3-hydroxy-3-methyl-glutaryl-CoA reductase or HMGR) (EC 1.1.1.34) is the rate-controlling enzyme of the mevalonate pathway, the metabolic pathway that produces cholesterol from acetyl-CoA. In an NADPH-dependent reaction, HMG-CoA reductase reduces HMG-CoA to generate mevalonate and CoA. The enzyme is target of a group of cholesterol-lowering drugs known as statins. Inhibition of HMG-CoA reductase induces expression of LDL receptors in the liver, which lowers plasma concentration of cholesterol.

**Platform**

Microplate reader

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**Properties**

**Storage instructions**

Store at -80°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMG-CoA</td>
<td>1 vial</td>
</tr>
<tr>
<td>HMG-CoA Reductase</td>
<td>1 vial</td>
</tr>
<tr>
<td>HMG-CoA Reductase Assay Buffer</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>Inhibitor (Atorvastatin, 10 mM)</td>
<td>1 x 10µl</td>
</tr>
</tbody>
</table>
Function
This transmembrane glycoprotein is involved in the control of cholesterol biosynthesis. It is the rate-limiting enzyme of sterol biosynthesis.

Pathway
Metabolic intermediate biosynthesis; (R)-mevalonate biosynthesis; (R)-mevalonate from acetyl-CoA: step 3/3.

Sequence similarities
Belongs to the HMG-CoA reductase family.

Cellular localization
Endoplasmic reticulum membrane. Peroxisome membrane.

Activity of HMG-CoA Reductase (positive control included in the kit) compared to the background control with no enzyme.

Comparison of HMG-CoA Reductase activity in absence or presence of specific inhibitors such as atorvastatin (100 µM) and pravastatin (10 ng/µl); ND: Not Detectable.

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