Product name: Dihydrofolate reductase (DHFR) Inhibitor Screening Kit (Colorimetric)

Detection method: Colorimetric

Sample type: Inhibitor compounds

Assay duration: Multiple steps standard assay

Product overview:
Dihydrofolate Reductase Inhibitor Screening Kit is designed for screening DHFR inhibitors. MTX is used as a positive control. The DHFR activity is monitored by the reduction in absorbance reading at OD 340 nm, while potential inhibitors arrest this decrease.

The kit is adapted to a 96-well format and provides a rapid, simple, sensitive, and reliable test for high-throughput screening of DHFR inhibitors.

Notes:
This product is manufactured by BioVision, an Abcam company and was previously called K247 Dihydrofolate Reductase Inhibitor Screening Kit (Colorimetric). K247-100 is the same size as the 100 test size of ab283374.

Platform:
Microplate (12 x 8 well strips)

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Properties:

Storage instructions:
Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHFR Assay Buffer</td>
<td>NM cap</td>
<td>1 x 35ml</td>
</tr>
<tr>
<td>DHFR Substrate</td>
<td>Red cap</td>
<td>1 x 450μl</td>
</tr>
<tr>
<td>Dihydrofolate Reductase</td>
<td>Green cap</td>
<td>1 vial</td>
</tr>
<tr>
<td>Methotrexate (10 mM)</td>
<td>Brown cap</td>
<td>1 x 25μl</td>
</tr>
<tr>
<td>NADPH</td>
<td>Yellow cap</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

Function:
Key enzyme in folate metabolism. Catalyzes an essential reaction for de novo glycine and purine
Pathway
Cofactor biosynthesis; tetrahydrofolate biosynthesis; 5,6,7,8-tetrahydrofolate from 7,8-dihydrofolate: step 1/1.

Sequence similarities
Belongs to the dihydrofolate reductase family.
Contains 1 DHFR (dihydrofolate reductase) domain.

Images

Inhibition of Dihydrofolate Reductase activity by Methotrexate (final concentration: 1 µM). IC50 of Methotrexate was calculated to be 13.25 ± 1.18 nM.

Dihydrofolate Reductase activity with or without Methotrexate.

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