**Oxamflatin**

**Cat. No.:** HY-102033  
**CAS No.:** 151720-43-3  
**Molecular Formula:** C₁₇H₁₄N₂O₄S  
**Molecular Weight:** 342.37  
**Target:** HDAC  
**Pathway:** Cell Cycle/DNA Damage; Epigenetics  
**Storage:**  
- Powder: -20°C 3 years  
- 4°C: 2 years  
- In solvent: -80°C 6 months  
- -20°C: 1 month

**SOLVENT & SOLUBILITY**

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>DMSO: ≥ 125 mg/mL (365.10 mM)</th>
<th><em>≥</em> means soluble, but saturation unknown.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td><strong>Mass</strong></td>
<td><strong>1 mg</strong></td>
</tr>
<tr>
<td>1 mM</td>
<td>2.9208 mL</td>
<td>14.6041 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5842 mL</td>
<td>2.9208 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2921 mL</td>
<td>1.4604 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

**BIOLOGICAL ACTIVITY**

**Description**  
Oxamflatin (Metacept-3) is a potent HDAC inhibitor with an IC₅₀ of 15.7 nM.

**IC₅₀ & Target**  
HDAC  
15.7 nM (IC₅₀)

**In Vitro**  
Oxamflatin induces transcriptional activation of junD and morphological reversion in various NIH3T3-derived transformed cell lines. Oxamflatin shows antiproliferative activity against various mouse and human tumor cell lines with drastic changes in the cell morphology. Oxamflatin causes an elongated cell shape with filamentous protrusions as well as arrest of the cell cycle at the G1 phase in HeLa cells. Oxamflatin greatly enhances the transcriptional activity of the CMV promoter in a dose-dependent manner and inhibits intracellular HDAC activity[1]. Oxamflatin in the nanomolar range induces morphological changes in OVCAR-5 and SKOV-3 ovarian cancer cell lines. Treatment with oxamflatin also leads to decreased cell viability. Oxamflatin is able to significantly inhibit DNA synthesis and cell proliferation[2]. Oxamflatin can induce E-cadherin expression and also reduce cell viability in the MKN-45 cell line[3].
**In Vivo**
Injection of oxamflatin, six times at the dose of 20 mg/kg, exhibits a significant increase in the days of survival (38% of ILS). The ILS of the mice treated with oxamflatin at the dose of 50 mg/kg is calculated to be more than 67% and one mouse survived over 60 days after tumor inoculation. No subsidiary effect, such as body weight loss, is observed at least up to this dose\(^1\).

**PROTOCOL**

**Cell Assay**\(^1\)
Cells grown in DMEM supplemented with 10% fetal bovine serum are challenged with serial two fold dilutions of oxamflatin on day 1 after the cells are seeded, and incubated for 2 days for the suspension cell cultures and for 3 days for the adherent cell cultures. Inhibition of the cell growth by oxamflatin is determined by staining with MTT as described previously\(^1\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**Animal Administration**\(^1\)
Mice: Oxamflatin is injected intraperitoneally into BDF1 mice on day 1, 3, 5, 7, 9 and 11 and after the intraperitoneal inoculation of single cell suspension of the B16 melanoma cells. The survival days of the animals are recorded and the percent of increased life span (ILS%) is calculated\(^1\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**


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**Caution:** Product has not been fully validated for medical applications. For research use only.

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