BAY-2402234

Cat. No.: HY-112645
CAS No.: 2225819-06-5
Molecular Formula: C$_{21}$H$_{18}$ClF$_5$N$_4$O$_4$
Molecular Weight: 520.84
Target: Dihydroorotate Dehydrogenase; DNA/RNA Synthesis
Pathway: Metabolic Enzyme/Protease; Cell Cycle/DNA Damage
Storage:
- Powder: -20°C for 3 years, 4°C for 2 years
- In solvent: -80°C for 6 months, -20°C for 1 month

**SOLVENT & SOLUBILITY**

**In Vitro**
DMSO: 125 mg/mL (240.00 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Concentration</td>
<td>1 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>1.9200 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3840 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1920 mL</td>
</tr>
</tbody>
</table>

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

**In Vivo**
1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**
BAY-2402234 is a selective dihydroorotate dehydrogenase (DHODH) inhibitor for the treatment of myeloid malignancies.

**IC$_{50}$ & Target**
DHODH$^{[1]}$.

**In Vitro**
BAY-2402234 is a selective low-nanomolar inhibitor of human DHODH enzymatic activity. In vitro, it potently inhibits proliferation of AML cell lines in the sub-nanomolar to low-nanomolar range. BAY-2402234 induces differentiation of AML cell lines also in a sub-nanomolar to low-nanomolar range, demonstrating the anticipated mode of action in cellular...
mechanistic assays\textsuperscript{[1]}. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>In Vivo</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAY-2402234 exhibits strong in vivo anti-tumor efficacy in monotherapy in several subcutaneous and disseminated AML xenografts as well as AML patient-derived xenograft (PDX) models. Target engagement of the novel DHODH inhibitor BAY-2402234 can be observed by increase of tumoral and plasma dihydroorotate levels after treatment with the inhibitor. Consistent with the in vitro data BAY-2402234 induces AML differentiation in vivo as detected by upregulation of differentiation cell surface markers in xenograft and PDX models after treatment with the inhibitor. Furthermore, differentiation-associated transcriptomic changes are evident following a single administration of BAY-2402234 in vivo\textsuperscript{[1]}. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</td>
</tr>
</tbody>
</table>

REFERENCES