**PD0325901**

**Cat. No.:** A3013  
**CAS No.:** 391210-10-9  
**Formula:** C16H14F3IN2O4  
**M.Wt:** 482.19  
**Synonyms:** PD0325901, PD-0325901, PD0325901, PD325901, PD 325901, PD-325901  
**Target:** MAPK Signaling  
**Pathway:** MEK1/2  
**Storage:** Store at -20°C

### Solvent & Solubility

**In Vitro**

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Concentration</th>
<th>Mass</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>2.0739 mL</td>
<td>10.3694 mL</td>
<td>20.7387 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.4148 mL</td>
<td>2.0739 mL</td>
<td>4.1477 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2074 mL</td>
<td>1.0369 mL</td>
<td>2.0739 mL</td>
</tr>
</tbody>
</table>

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

### Biological Activity

**Shortsummary**  
MEK inhibitor

**IC50 & Target**

**Cell Viability Assay**

**Cell Line:** M14 (BRAFV600E) cells  
**Preparation method:** The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions: 1 μM, 48 hours for cell cycle accumulation; ≥100 nM, 72 hours for DNA decrease

Applications: PD0325901 caused a dose- and time-dependent cell cycle accumulation at the G1/S boundary and depletion of cells in the S-phase. It also caused a dose- and time-dependent increase in the percentage of cells with sub-G1 DNA content, thus indicating induction of apoptosis. Compared with the kinetics and dose-response curve of cell cycle inhibition, DNA decrease to sub-G1 levels required longer times of exposure (72 hours) and higher concentrations of the drug (≥100 nM).

Animal experiment

Animal models: Female CD-1 nude (nu/nu) mice injected with M14 (BRAFV600E) and ME8959 (wtBRAF) cells

Dosage form: Oral administration, 50 mg/kg per day for 21 days

Applications: Daily oral treatment of established tumors with 50 mg/kg per day of PD0325901 significantly impaired in vivo tumor growth (60%-65% inhibition compared with controls at the end of a 21-day treatment cycle) in both M14 and ME8959 xenografts. The effects of PD0325901 were reversible, and tumors grew back after treatment interruption.

Other notes: Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations


References

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