Sorafenib

Cat. No.: A3009  
CAS No.: 284461-73-0  
Formula: C21H16ClF3N4O3  
M.Wt: 464.82

Synonyms: BAY-43-9006, Sorafenib, Nexavar, sorafenibum  
Target: Tyrosine Kinase  
Pathway: PDGFR

Storage: Store at -20°C

Solvent & Solubility

≥23.25 mg/mL in DMSO; insoluble in H2O; insoluble in EtOH

<table>
<thead>
<tr>
<th>Mass</th>
<th>Preparing Stock Solutions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Solvent</td>
</tr>
<tr>
<td>1 mM</td>
<td>2.1514 mL</td>
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<tr>
<td>5 mM</td>
<td>0.4303 mL</td>
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<tr>
<td>10 mM</td>
<td>0.2151 mL</td>
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Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary  
Raf kinases and tyrosine kinases inhibitor

IC₅₀ & Target  
22 nM (B-Raf), 90 nM (VEGFR2), 57 nM (PDGFRβ)

Cell Viability Assay

Cell Line: PLC/PRF/5 and HepG2 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: IC50: 6.3 μM for PLC/PRF/5 cells 4.5 μM for HepG2 cells 72 hours

Applications: The effect of sorafenib on cell proliferation was measured by CellTiter-Glo assay. Sorafenib inhibited cell proliferation dose-dependently with an IC50 of 6.3 μmol/L in PLC/PRF/5 and 4.5 μmol/L in HepG2 cells.

Animal experiment

Animal models: Female CB17 SCID mice injected with PLC/PRF/5 cells
Dosage form: Oral administration; 10, 30, and 100 mg/kg body weight; once daily for 16 or 21 days

Applications: Sorafenib tosylate produced dose-dependent growth inhibition of s.c. implanted PLC/PRF/5 tumor xenografts in SCID mice. Dose levels of 10 and 30 mg/kg produced significant and dose-dependent TGIs of 49% and 78%, respectively. Sorafenib tosylate produced durable partial tumor regressions in 50% of the mice at the 100 mg/kg dose level.

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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