Tipelukast

Cat. No.: HY-14938
CAS No.: 125961-82-2
Molecular Formula: \( \text{C}_{29}\text{H}_{38}\text{O}_{7}\text{S} \)
Molecular Weight: 530.67
Target: Leukotriene Receptor
Pathway: GPCR/G Protein
Storage: Powder -20°C 3 years
In solvent -80°C 6 months
-20°C 1 month

SOLVENT & SOLUBILITY

In Vitro
Ethanol: 1 mg/mL (1.88 mM; Need ultrasonic and warming)

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.8844 mL</td>
<td>9.4221 mL</td>
<td>18.8441 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10 mM</td>
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</tbody>
</table>

Preparing Stock Solutions

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

BIOLOGICAL ACTIVITY

Description
Tipelukast (KCA 757) is a sulfidopeptide leukotriene receptor antagonist, an orally bioavailable anti-inflammatory agent and used for the treatment of asthma.

\( \text{IC}_{50} \) & Target
<table>
<thead>
<tr>
<th>LTD(_4)</th>
<th>LTE(_4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.41 (pA2, In guinea-pigs)</td>
<td>6.45 (pA2, In guinea-pigs)</td>
</tr>
</tbody>
</table>

In Vitro
Tipelukast inhibits the binding of \(^{3}\text{H}\) LTD4 to the LTD4 receptors on pul-monary cell membrane of guinea-pigs \((\text{IC}_{50} = 2.3 \mu \text{mol})^2\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo
Fifteen min after an aerosolized antigen challenge, and UNDW inhaled 5 min later into the guinea pigs, Tipelukast significantly alters the UNDW-induced bronchoconstriction\(^1\). Tipelukast (1 and 5 mg/kg) administered intravenously 15 min after antigen challenge reduces the propranolol-induced bronchoconstriction (PIB) in a dose-dependent manner in guinea-pigs\(^2\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
REFERENCES
