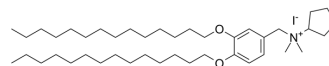


## CAY10614

<b>Cat. No.:</b>	HY-135042
<b>CAS No.:</b>	1202208-36-3
<b>Molecular Formula:</b>	C <sub>42</sub> H <sub>78</sub> INO <sub>2</sub>
<b>Molecular Weight:</b>	755.98
<b>Target:</b>	Toll-like Receptor (TLR)
<b>Pathway:</b>	Immunology/Inflammation
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 12.5 mg/mL (16.53 mM); ultrasonic and warming and heat to 60°C																							
	<table border="1"> <thead> <tr> <th rowspan="2">Preparing Stock Solutions</th> <th rowspan="2">Solvent Concentration</th> <th colspan="3">Mass</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td></td> <td>1 mM</td> <td>1.3228 mL</td> <td>6.6139 mL</td> <td>13.2279 mL</td> </tr> <tr> <td></td> <td>5 mM</td> <td>0.2646 mL</td> <td>1.3228 mL</td> <td>2.6456 mL</td> </tr> <tr> <td></td> <td>10 mM</td> <td>0.1323 mL</td> <td>0.6614 mL</td> <td>1.3228 mL</td> </tr> </tbody> </table>	Preparing Stock Solutions	Solvent Concentration	Mass			1 mg	5 mg	10 mg		1 mM	1.3228 mL	6.6139 mL	13.2279 mL		5 mM	0.2646 mL	1.3228 mL	2.6456 mL		10 mM	0.1323 mL	0.6614 mL	1.3228 mL
Preparing Stock Solutions	Solvent Concentration			Mass																				
		1 mg	5 mg	10 mg																				
	1 mM	1.3228 mL	6.6139 mL	13.2279 mL																				
	5 mM	0.2646 mL	1.3228 mL	2.6456 mL																				
	10 mM	0.1323 mL	0.6614 mL	1.3228 mL																				
	Please refer to the solubility information to select the appropriate solvent.																							
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: 0.83 mg/mL (1.10 mM); Suspended solution; Need ultrasonic</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: 0.83 mg/mL (1.10 mM); Suspended solution; Need ultrasonic</li> </ol>																							

### BIOLOGICAL ACTIVITY

<b>Description</b>	CAY10614 is a potent TLR4 antagonist. CAY10614 inhibits the lipid A-induced activation of TLR4, with an IC <sub>50</sub> of 1.675 μM. CAY10614 can improve survival of mice in lethal endotoxin shock model <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	TLR4 1.675 μM (IC <sub>50</sub> , in HEK293 cells)
<b>In Vitro</b>	<p>CAY10614 (compound 7) (1-10 μM) inhibits the lipid A-induced increase of phosphatase activity in a concentration-dependent manner in HEK293 cells<sup>[1]</sup>.</p> <p>CAY10614 (0.5 μM) inhibits the increase of [Ca<sup>2+</sup>]<sub>cyt</sub> induced by LPS in &gt;18 days in vitro (DIV) neurons<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

**In Vivo**

CAY10614 (compound 7) (10 mg/kg; i.p. 30 min before the LPS) significantly improves survival of mice given intraperitoneal LPS (20 mg/kg)<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6J male mice (9 weeks) were i.p. injected with 20 mg/kg LPS <sup>[1]</sup>
Dosage:	10 mg/kg
Administration:	I.p. 30 min before the LPS
Result:	Increased the survival rate of mice from 0% to 67%.

**REFERENCES**

- [1]. Piazza M, et, al. Glycolipids and benzylammonium lipids as novel antisepsis agents: synthesis and biological characterization. J Med Chem. 2009 Feb 26;52(4):1209-13.
- [2]. Rodríguez MC, et, al. Aging and amyloid  $\beta$  oligomers enhance TLR4 expression, LPS-induced Ca<sup>2+</sup> responses, and neuron cell death in cultured rat hippocampal neurons. J Neuroinflammation. 2017 Jan 31;14(1):24.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA