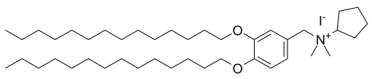
Data Sheet

Product Name:	CAY10614
Cat. No.:	CS-0109148
CAS No.:	1202208-36-3
Molecular Formula:	$C_{42}H_{78}INO_2$
Molecular Weight:	755.98
Target:	Toll-like Receptor (TLR)
Pathway:	Immunology/Inflammation
Solubility:	DMSO : 12.5 mg/mL (16.53 mM; ultrasonic and warming and heat to 60°C)



BIOLOGICAL ACTIVITY:

CAY10614 is a potent **TLR4** antagonist. CAY10614 inhibits the lipid A-induced activation of TLR4, with an **IC_{50}** of 1.675 μM. CAY10614 can improve survival of mice in lethal endotoxin shock model[1][2]. **In Vitro:** CAY10614 (compound 7) (1-10 μM) inhibits the lipid A-induced increase of phosphatase activity in a concentration-dependent manner in HEK293 cells[1]. CAY10614 (0.5 μM) inhibits the increase of $[Ca^{2+}]_{cyt}$ induced by LPS in >18 days in vitro (DIV) neurons[2]. **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)[1].

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 β oligomers enhance TLR4 expression, LPS-induced Ca 2+ responses, and neuron cell death in cultured rat hippocampal neurons. J Neuroinflammation. 2017 Jan 31;14(1):24.

CAIndexNames:

Benzenemethanaminium, N-cyclopentyl-N,N-dimethyl-3,4-bis(tetradecyloxy)-, iodide (1:1)

SMILES:

CCCCCCCCCCCCCCOC1=CC=C(C[N+](C)(C2CCCC2)C)C=C1OCCCCCCCCCCCCCC.[I-]

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

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