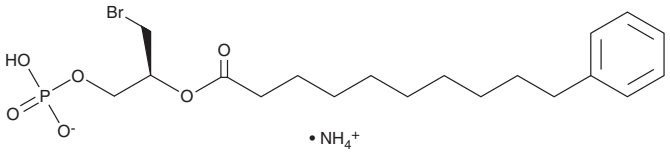
PRODUCT INFORMATION

UCM-05194 (ammonium salt)

Item No. 41682

Formal Name:	benzenedecanoic acid, (1S)-1-(bromomethyl)-2-(phosphonooxy) ethyl ester, monoammonium salt
MF:	$C_{19}H_{29}BrO_6P \bullet NH_4$
FW:	482.4
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

UCM-05194 (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the UCM-05194 (ammonium salt) in the solvent of choice, which should be purged with an inert gas. UCM-05194 (ammonium salt) is soluble in DMSO and water. UCM-05194 (ammonium salt) is slightly soluble in ethanol.

UCM-05194 (ammonium salt) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

UCM-05194 is an agonist of lysophosphatidic acid receptor 1 (LPA_1).[1] It induces calcium mobilization in RH7777 cells expressing LPA_1 (EC_{50} = 0.24 µM). It is selective for LPA_1 over LPA_2 and LPA_3 at 10 µM and is 10-fold selective over LPA_5 and 50-fold selective over LPA_4, LPA_6, and autotaxin. UCM-05194 (1 µM) induces neurite retraction in, and migration of, B103 rat neuroblastoma cells overexpressing LPA_1. It induces receptor internalization and neuronal desensitization in the same cells when used at a concentration of 1 µM and reduces the firing activity of primary rat neonatal dorsal root ganglia (DRG) neurons with repeated application at 10 µM. UCM-05194 (10 mg/kg) reduces acetic acid-induced writhing and hind paw mechanical hypersensitivity in mice.

Reference

1. González-Gil, I., Zian, D., Vázquez-Villa, H., *et al.* A novel agonist of the type 1 lysophosphatidic acid receptor (LPA_1), UCM-05194, shows efficacy in neuropathic pain amelioration. *J. Med. Chem.* **63(5)**, 2372-2390 (2020).

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