Bay 59-3074

Cat. No.: HY-100488

CAS No.: 406205-74-1

Molecular Formula: $C_{18}H_{13}F_6NO_4S$

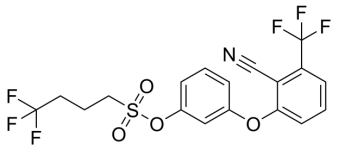
Molecular Weight: 453.36

Target: Cannabinoid Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (220.58 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2058 mL	11.0288 mL	22.0575 mL
5 mM	0.4412 mL	2.2058 mL	4.4115 mL
10 mM	0.2206 mL	1.1029 mL	2.2058 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bay 59-3074 is a selective cannabinoid CB_1/CB_2 receptor partial agonist with K_i values of 48.3 and 45.5 nM at human CB_1 and CB_2 receptors, respectively. Bay 59-3074 has analgesic properties[1].

IC_{50} & Target

CB1	CB2
48.3 nM (Ki)	45.5 nM (Ki)

In Vivo

BAY 59-3074 (0.3-3 mg/kg; oral administration; daily; for 2 weeks; male Wistar rats) treatment improves antihyperalgesic and antiallodynic effects against thermal or mechanical stimuli in rat models of chronic neuropathic and inflammatory pain.

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

Animal Model:	Male Wistar rats (160-250 g)[1]
Dosage:	0.3 mg/kg, 1 mg/kg, and 3 mg/kg
Administration:	Oral administration; daily; for 2 weeks.
Result:	Antiallodynic efficacy in the spared nerve injury model was maintained after 2 weeks of daily administration. Tolerance developed rapidly (within 5 days) for cannabinoid-related side effects. Antihyperalgesic and antiallodynic efficacy was maintained/increased.

REFERENCES

[1]. De Vry J et al. 3-[2-cyano-3-(trifluoromethyl)phenoxy]phenyl-4,4,4-trifluoro-1-butanesulfonate (BAY 59-3074): a novelcannabinoid Cb1/Cb2 receptor partial agonist with antihyperalgesic and antiallodynic effects. J Pharmacol Exp Ther. 2004 Aug;310(2):620-32.

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