

Product data sheet



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| MedKoo Cat#: 524385 Name: BAY-59-3074 CAS#: 406205-74-1 Chemical Formula: C ₂₁ H ₂₁ FN ₈ O Exact Mass: 420.1822 Molecular Weight: 420.44 | | |
| Product supplied as: | Powder | |
| Purity (by HPLC): | ≥ 98% | |
| Shipping conditions | Ambient temperature | |
| Storage conditions: | Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks. | |

1. Product description:

BAY-59-3074 is a novel cannabinoid CB1/CB2 receptor partial agonist with analgesic properties. It displays anti-hyperalgesic and antiallodynic properties in rat models of chronic neuropathic and inflammatory pain.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

| Solvent | Max Conc. mg/mL | Max Conc. mM |
|---------|-----------------|--------------|
| DMSO | 56.78 | 135.05 |
| Ethanol | 68.17 | 162.14 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|----------|----------|
| 1 mM | 2.38 mL | 11.89 mL | 23.78 mL |
| 5 mM | 0.48 mL | 2.38 mL | 4.76 mL |
| 10 mM | 0.24 mL | 1.19 mL | 2.38 mL |
| 50 mM | 0.05 mL | 0.24 mL | 0.48 mL |

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

1. De Vry J, Denzer D, Reissmueller E, Eijckenboom M, Heil M, Meier H, Mauler F. 3-[2-cyano-3-(trifluoromethyl)phenoxy]phenyl-4,4,4-trifluoro-1-butananesulfonate (BAY 59-3074): a novel cannabinoid Cb1/Cb2 receptor partial agonist with antihyperalgesic and antiallodynic effects. J Pharmacol Exp Ther. 2004 Aug;310(2):620-32. doi: 10.1124/jpet.103.062836. Epub 2004 May 12. PMID: 15140913.

7. Bioactivity

Biological target: Bay 59-3074 is a cannabinoid CB1/CB2 receptor partial agonist with K_i values of 48.3 and 45.5 nM at human CB1 and CB2 receptors, respectively.

In vitro activity

TBD

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In vivo activity

BAY 59-3074 (0.3-3 mg/kg, p.o.) induced antihyperalgesic and antiallodynic effects against thermal or mechanical stimuli in rat models of chronic neuropathic (chronic constriction injury, spared nerve injury, tibial nerve injury, and spinal nerve ligation models) and inflammatory pain (carrageenan and complete Freund's adjuvant models). Antiallodynic efficacy of BAY 59-3074 (1 mg/kg, p.o.) in the spared nerve injury model was maintained after 2 weeks of daily administration. However, tolerance developed rapidly (within 5 days) for cannabinoid-related side effects, which occur at doses above 1 mg/kg (e.g., hypothermia). Uptitration from 1 to 32 mg/kg p.o. (doubling of daily dose every 4th day) prevented the occurrence of such side effects, whereas antihyperalgesic and antiallodynic efficacy was maintained/increased. No withdrawal symptoms were seen after abrupt withdrawal following 14 daily applications of 1 to 10 mg/kg p.o. It is concluded that BAY 59-3074 may offer a valuable therapeutic approach to treat diverse chronic pain conditions.

Reference: J Pharmacol Exp Ther. 2004 Aug;310(2):620-32. <https://jpet.aspetjournals.org/content/310/2/620.long>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.