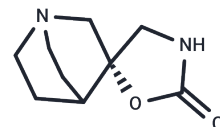


AR-R 17779 hydrochloride

Chemical Properties

CAS No. :	178419-42-6
Formula:	C ₉ H ₁₅ ClN ₂ O ₂
Molecular Weight:	218.68
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



HCl

Biological Description

Description	AR-R17779 hydrochloride is a potent, selective full agonist of the nAChR, demonstrating K _i values of 92 nM for the α7 subtype and 16,000 nM for the α4β2 subtype. It is noted for its ability to enhance learning and memory in rats, suggesting potential therapeutic applications. Additionally, this compound exhibits anxiolytic properties and can mitigate inflammation by activating anti-inflammatory cholinergic (vagal) pathways [1] [2] [4].
In vitro	AR-R17779 demonstrates a fivefold increase in potency and is 35,000 times more selective for the α7 nicotinic receptor than (-)-nicotine [1]. Additionally, when applied at a concentration of 200 nM for 24 hours, AR-R17779 effectively inhibits LPS-induced TNF production in macrophages [4].
In vivo	AR-R17779, administered intraperitoneally (i.p.) at doses of 1-5 mg/kg twice daily for 7 days, has been shown to improve arthritis symptoms, reduce synovial inflammation, delay the onset of the disease, and protect against joint destruction in male DBA/1 mice aged 8-10 weeks. This compound, when given subcutaneously (s.c.) at 1-10 mg/kg for 3 weeks, also enhances learning in two radial-arm maze tasks and reverses working memory impairments in rats with fimbria-fornix sections. Notably, in an animal model where arthritis was induced with type II collagen following unilateral cervical vagotomy or sham surgery, doses of 1, 2.5, and 5 mg/kg administered i.p. twice daily from day 20 to day 26 led to amelioration of arthritis, delayed disease onset, and reductions in erosive disease, cartilage degradation, synovial inflammation, and TNFα levels in both plasma and synovial tissue.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5729 mL	22.8645 mL	45.7289 mL
5 mM	0.9146 mL	4.5729 mL	9.1458 mL
10 mM	0.4573 mL	2.2864 mL	4.5729 mL
50 mM	0.0915 mL	0.4573 mL	0.9146 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

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