

Product Data Sheet

Product Name: A 844606

Cat. No.: GC15333

Chemical Properties

Cas. No. 861119-08-6

Chemical Name 2-((3aR,6aR)-5-methylhexahydropyrrolo[3,4-c]pyrrol-2(1H)-yl)-9H-xanthen-9-one

SMILES O=C1C2=CC(N3C[C@@H](CN(C)C4)[C@H]4C3)=CC=C2OC5=CC=CC=C15

Formula $C_{20}H_{20}N_2O_2$

M.Wt 320.38

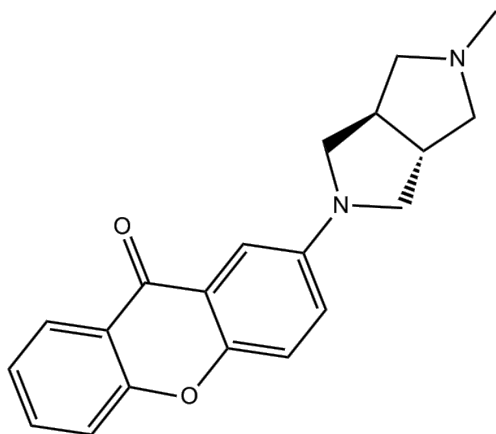
Solubility <1.6mg/ml in ethanol

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

A 844606 is a potent and selective partial agonist of $\alpha 7$ nicotinic acetylcholine receptor (nAChR) with IC₅₀ value of 11 nM [1].

The $\alpha 7$ nAChR is a nicotinic acetylcholine receptor and is located in the brain, spleen and lymphocytes of lymph nodes. The $\alpha 7$ nAChR plays an important role in the pathophysiology of neuropsychiatric diseases such as Alzheimer's disease, schizophrenia, drug addiction and

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depression [2].

A 844606 is a potent and selective $\alpha 7$ nAChR partial agonist with IC₅₀ values of 11 and >30000 nM for $\alpha 7$ and $\alpha 4\beta 2$, respectively. In *Xenopus* oocytes expressed recombinant human and rat $\alpha 7$ nAChR, A 844606 showed agonist activity with EC₅₀ values of 1.4 and 2.2 μ M, respectively. In PC12 cells, A 844606 activated $\alpha 7$ nAChR, which stimulated ERK1/2 phosphorylation [1].

In the mouse brain, A 844606 showed high uptake. In monkey brain, A 844606 was mainly distributed in the thalamus and hippocampus and was low in the cerebellum. Also, A 844606 was reduced by pretreatment with SSR180711, an $\alpha 7$ nAChR agonist [2].

References:

- [1]. Briggs CA, Schrimpf MR, Anderson DJ, et al. $\alpha 7$ nicotinic acetylcholine receptor agonist properties of tilorone and related tricyclic analogues. *Br J Pharmacol*, 2008, 153(5): 1054-1061.
- [2]. Toyohara J, Ishiwata K, Sakata M, et al. In vivo evaluation of $\alpha 7$ nicotinic acetylcholine receptor agonists [¹¹C]A-582941 and [¹¹C]A-844606 in mice and conscious monkeys. *PLoS One*, 2010, 5(2): e8961.

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