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 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	A 844606		

Background

A 844606 is a potent and selective partial agonist of α7 nicotinic acetylcholine receptor (nAChR) with IC50 value of 11 nM [1].

The α7 nAChR is a nicotinic acetylcholine receptor and is located in the brain, spleen and lymphocytes of lymph nodes. The α7 nAChR plays an important role in the pathophysiology of neuropsychiatric diseases such as Alzheimer’s disease, schizophrenia, drug addiction and depression [2].

A 844606 is a potent and selective α7 nAChR partial agonist with IC50 values of 11 and >30000 nM for α7 and α4β2, respectively. In Xenopus oocytes expressed recombinant human and rat α7 nAChR, A 844606 showed agonist activity with EC50 values of 1.4 and 2.2 μM, respectively. In PC12 cells, A 844606 activated α7 nAChR, which stimulated ERK1/2 phosphorylation [1].

In the mouse brain, A 844606 showed high uptake. In monkey brain, A 844606 was

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mainly distributed in the thalamus and hippocampus and was low in the cerebellum. Also, A 844606 was reduced by pretreatment with SSR180711, an α7 nAChR agonist [2].

References:

[1]. Briggs CA, Schrimpf MR, Anderson DJ, et al. alpha7 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 alpha7 nicotinic acetylcholine receptor agonists [11C]A-582941 and [11C]A-844606 in mice and conscious monkeys. PLoS One, 2010, 5(2): e8961.