Product Data Sheet

Product Name: OAB-14
Cat. No.: GC68377

Chemical Properties

Cas. No.	2140911-49-3		
Formula	$C_{32}H_{46}N_4O_2$	M.Wt	518.73
Solubility	DMSO : 20 mg/mL (38.56 mM; ultrasonic and warming and adjust pH to 3 with HCl and heat to 60°C)	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	OAB-14		

Background

OAB-14, is a Bexarotene derivative, improves Alzheimer's disease-related pathologies and cognitive impairments by increasing β-amyloid clearance in APP/PS1 mice. OAB-14 effectively ameliorates the dysfunction of the endosomal-autophagic-lysosomal pathway in APP/PS1 transgenic mice[1][2].

OAB-14 significantly alleviates cognitive impairments in amyloid precursor protein (APP)/presenilin 1 (PS1) transgenic mice after administration for 15 days or 3 months. OAB-14 rapidly cleared 71% of Aβ by promoting microglia phagocytosis and increasing IDE and NEP expression. OAB-14 also attenuates the downstream pathological events of Aβ accumulation, such as synaptic degeneration, neuronal loss, tau hyperphosphorylation and neuroinflammation in APP/PS1 mice. OAB-14 has no significant effect on body weight or liver toxicity after acute and chronic treatment[1]. OAB-14 facilitates receptor-mediated endocytosis and restores autophagy flux via the AMPK/mTOR pathway. OAB-14 enhances the lysosomal activity, and reduced Aβ accumulation in lysosomes is observed in OAB-14-treated AD mice[2].

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[1]. Guo X, et al. OAB-14 Effectively Ameliorates the Dysfunction of the Endosomal-Autophagic-Lysosomal Pathway in APP/PS1 Transgenic Mice. ACS Chem Neurosci. 2021;12(21):3985-3993.
[2]. Yuan C, et al. OAB-14, a bexarotene derivative, improves Alzheimer's disease-related pathologies and cognitive impairments by increasing β-amyloid clearance in APP/PS1 mice. Biochim Biophys Acta Mol Basis Dis. 2019;1865(1):161-180.

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