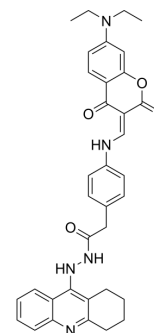


## PE154

Cat. No.:	HY-103373
CAS No.:	1192750-33-6
Molecular Formula:	C <sub>35</sub> H <sub>35</sub> N <sub>5</sub> O <sub>4</sub>
Molecular Weight:	589.68
Target:	Cholinesterase (ChE)
Pathway:	Neuronal Signaling
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 8.33 mg/mL (14.13 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		1.6958 mL	8.4792 mL	16.9583 mL
	5 mM		0.3392 mL	1.6958 mL	3.3917 mL
	10 mM		0.1696 mL	0.8479 mL	1.6958 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

PE154 (Compound 13) is a potent fluorescent inhibitor of human acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) (IC<sub>50</sub>s=280 pM and 16 nM, respectively)<sup>[1]</sup>. PE154 can label β-amyloid plaques in histochemical analysis<sup>[2]</sup>.

#### IC<sub>50</sub> & Target

BChE 16 nM (IC <sub>50</sub> )	AChE 280 pM (IC <sub>50</sub> )
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#### In Vivo

PE154 (hippocampus injection; 0.2 μg per mouse; once) can stain the histochemical of cortical βamyloid plaques<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	13–20-month-old triple-transgenic mice harbouring three mutant genes (APP <sup>swe</sup> , PS-1 and tauP301L) <sup>[2]</sup>
Dosage:	0.2 μg per mouse
Administration:	Hippocampus injection; 0.2 μg per mouse; once

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Result:	Showed the histochemical staining of cortical $\beta$ amyloid plaques in triple-transgenic (TTG) mice.
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## REFERENCES

- [1]. Paul W Elsinghorst, et al. A gorge-spanning, high-affinity cholinesterase inhibitor to explore beta-amyloid plaques. *Org Biomol Chem*. 2009 Oct 7;7(19):3940-6.
- [2]. Davide Brambilla, et al. Nanotechnologies for Alzheimer's disease: diagnosis, therapy, and safety issues. *Nanomedicine*. 2011 Oct;7(5):521-40.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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