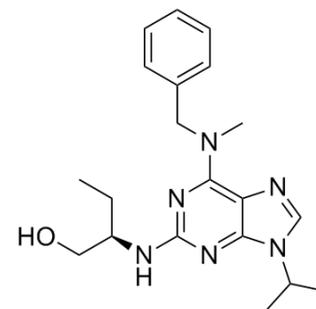


Aftin-4

Cat. No.:	HY-111267		
CAS No.:	866893-90-5		
Molecular Formula:	C ₂₀ H ₂₈ N ₆ O		
Molecular Weight:	368.48		
Target:	Amyloid-β		
Pathway:	Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



Solvent & Solubility

In Vitro

DMSO : ≥ 250 mg/mL (678.46 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		2.7139 mL	13.5693 mL	27.1385 mL
	5 mM		0.5428 mL	2.7139 mL	5.4277 mL
	10 mM		0.2714 mL	1.3569 mL	2.7139 mL

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

BIOLOGICAL ACTIVITY

Description	Aftin-4 is an Amyloid-β ₄₂ (Aβ ₄₂) inducer.
IC ₅₀ & Target	Amyloid-β ^[1]
In Vitro	Aftin-4 selectively and potently increases Aβ ₁₋₄₂ in N2a cells, primary neurons, and brain lysates, with an EC ₅₀ value around 30 μM ^[1] .
In Vivo	Aftin-4 increases Aβ ₁₋₄₂ levels in vivo in mice and provokes rapidly a sustained toxicity highly reminiscent of Alzheimer's disease (AD). Aftin-4 is administered at increasing doses, between 3 and 20 nmol/mouse, into the lateral ventricle and animals are sacrificed at various time points, between 3 to 14 days after injection. The hippocampus is dissected out the contents in Aβ ₁₋₄₀ or Aβ ₁₋₄₂ is determined using a mouse ELISA assay. Aftin-4 dose-dependently and significantly increases Aβ ₁₋₄₂ content, up to +216% at the highest dose tested ^[1] .

PROTOCOL

Animal Administration ^[1]

Mice^[1]

Male Swiss OF-1 mice, aged 7-9 weeks and weighing 32±2 g are used. Aftin-4 is solubilized in DMSO at a concentration of **3 mg/mL** and stored at -20°C until use. Aftin-4 is administered intracerebroventricularly (i.c.v.), with a Hamilton microsyringe equipped with a 3-mm needle in a final volume of **3 µL** per mouse. The injection coordinates are -0.4 mm with respect to bregma, 1.00mm to the right from the central, and 2.50mm in depth. Aftin-4 is also injected intraperitoneally (i.p.). Aftin-4 is solubilized in DMSO 40% in distilled water at **2, 6 or 20 mg/mL** and administered in a final volume of **100 µL/20 g** body weight^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Meunier J, et al. Brain toxicity and inflammation induced in vivo in mice by the amyloid-β forty-two inducer aftin-4, a roscovitine derivative. *J Alzheimers Dis.* 2015;44(2):507-24.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA