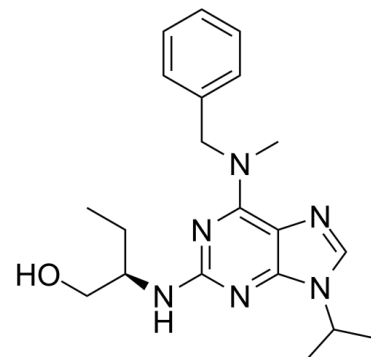


Data Sheet

Product Name:	Aftin-4
Cat. No.:	CS-0034791
CAS No.:	866893-90-5
Molecular Formula:	C ₂₀ H ₂₈ N ₆ O
Molecular Weight:	368.48
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Solubility:	DMSO : ≥ 100 mg/mL (271.39 mM)



BIOLOGICAL ACTIVITY:

Aftin-4 is an **Amyloid-β₄₂ (Aβ₄₂)** inducer. IC₅₀ & Target: Amyloid-β^[1] **In Vitro:** Aftin-4 selectively and potently increases Aβ₁₋₄₂ in N2a cells, primary neurons, and brain lysates, with an EC₅₀ value around 30 μM^[1]. **In Vivo:** Aftin-4 increases Aβ₁₋₄₂ 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 Aβ₁₋₄₀ or Aβ₁₋₄₂ is determined using a mouse ELISA assay. Aftin-4 dose-dependently and significantly increases Aβ₁₋₄₂ content, up to +216% at the highest dose tested^[1].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: Aftin-4 is solubilized in DMSO 40% in distilled water (i.p.)^{[1],[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].

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.

CAIndexNames:

1-Butanol, 2-[[9-(1-methylethyl)-6-[methyl(phenylmethyl)amino]-9H-purin-2-yl]amino]-, (2R)-

SMILES:

CC[C@@H](NC1=NC(N(C)CC2=CC=CC=C2)=C3N=CN(C(C)C)C3=N1)CO

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

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