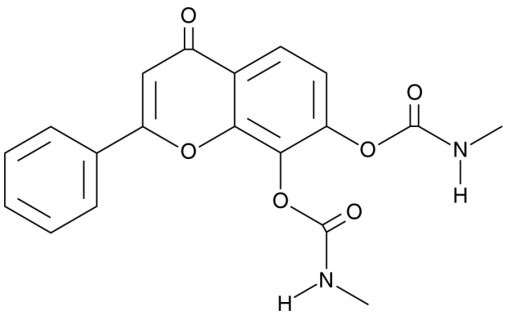
Product Data Sheet

Product Name: TrkB Agonist Prodrug R13
Cat. No.: GC91977

Chemical Properties

Cas. No.	1609067-49-3		
Chemical Name	7,8-bis[[(methylamino)carbonyl]oxy]-2-phenyl-4H-1-benzopyran-4-one		
SMILES	O=C(NC)OC1=C(OC(C2=CC=CC=C2)=CC3=O)C3=CC=C1OC(NC)=O		
Formula	$C_{19}H_{16}N_2O_6$	M.Wt	368.3
Solubility	Acetonitrile: Slightly soluble: 0.1-1 mg/ml,DMSO: Slightly soluble: 0.1-1 mg/ml,Water: Slightly soluble: 0.1-1 mg/ml	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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			

Background

TrkB agonist prodrug R13 (R13) is a prodrug form of the tropomyosin-related kinase B (TrkB) activator 7,8-dihydroxyflavone.[1] Oral administration of R13 (43.6 mg/kg per day) increases hippocampal phosphorylated levels of TrkB, ERK, and Akt in the 5XFAD transgenic mouse model of Alzheimer's disease. It decreases the number of malformed neurons and increases the number of neurons and active synapses in the hippocampus in 5XFAD mice. R13 decreases the number of

plaques and levels of amyloid-β (1-40) (Aβ40) in the hippocampus and frontal cortex and escape latency in the Morris water maze in 5XFAD mice. It reduces the levels and activity of δ-secretase, also known as asparagine endopeptidase (Aep) and legumain, and the levels of Il-6, Tnf-α, and Il-1β in brain homogenates from 5XFAD mice.

References:

[1]. Chen, C., Wang, Z., Zhang, Z., et al.The prodrug of 7,8-dihydroxyflavone development and therapeutic efficacy for treating Alzheimer's diseaseProc. Natl. Acad. Sci. U S A115(3)578-583(2018).