

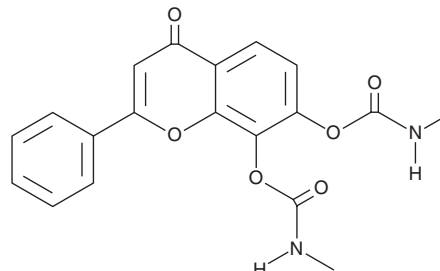
PRODUCT INFORMATION



TrkB Agonist Prodrug R13

Item No. 42074

CAS Registry No.: 1609067-49-3
Formal Name: 7,8-bis[[[(methylamino)carbonyl]oxy]-2-phenyl-4H-1-benzopyran-4-one
Synonyms: TrkB-IN-1,
Tropomyosin-related Kinase B Agonist Prodrug R13,
Tropomyosin-related Kinase B Inhibitor 1
MF: C₁₉H₁₆N₂O₆
FW: 368.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: May degrade in water
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TrkB agonist prodrug R13 is supplied as a solid. A stock solution may be made by dissolving the TrkB agonist prodrug R13 in the solvent of choice, which should be purged with an inert gas. TrkB agonist prodrug R13 is slightly soluble (0.1-1 mg/ml) in acetonitrile and DMSO.

TrkB agonist prodrug R13 is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

TrkB agonist prodrug R13 (R13) is a prodrug form of the tropomyosin-related kinase B (TrkB) activator 7,8-dihydroxyflavone (Item No. 16946).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.

Reference

1. Chen, C., Wang, Z., Zhang, Z., *et al.* The prodrug of 7,8-dihydroxyflavone development and therapeutic efficacy for treating Alzheimer's disease. *Proc. Natl. Acad. Sci. U S A* **115**(3), 578-583 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM