

Product Data Sheet

Product Name: OBA-09
Cat. No.: GC18673

Chemical Properties

Cas. No. 856095-68-6

Chemical Name 2-(1,2-dioxopropoxy)-benzoic acid

SMILES O=C(O)C1=C(OC(C(C)=O)=O)C=CC=C1

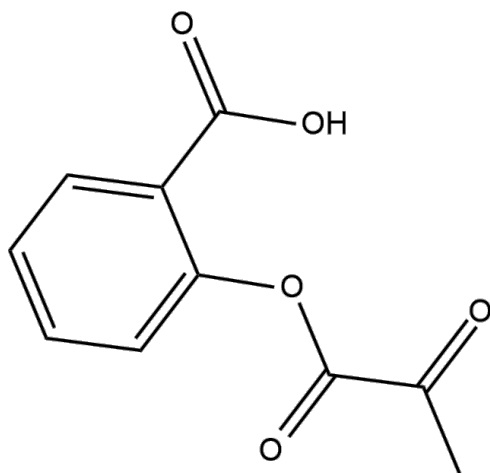
Formula $C_{10}H_8O_5$ M.Wt 208.2

Solubility DMF: 30mg/mL, DMSO: 40mg/mL, Ethanol: 80mg/mL, PBS (pH 7.2): 2.7mg/mL
Storage Store at -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

OBA-09 is a novel multimodal neuroprotectant oxopropanoyloxy benzoic acid (a salicylic acid/pyruvate ester); shows robust protective effects in the postischemic brain. IC50 value: Target: OBA-09 exhibited antioxidative effects in the postischemic brain, which was evidenced by remarkable

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reduction of lipid peroxidation and 4-hydroxy-2-nonenal staining in OBA-09-administered animals. Reactive oxygen species generation was markedly suppressed in primary cortical cultures under oxygen-glucose deprivation. More interestingly, OBA-09 was capable of scavenging hydroxyl radical in cell-free assays. High-performance liquid chromatography results demonstrated that OBA-09 was hydrolyzed to salicylic acid and pyruvate with $t_{1/2} = 43$ min in serum and 4.2 h in brain parenchyma, indicating that antioxidative function of OBA-09 is executed by itself and also by salicylic acid after the hydrolysis. In addition to antioxidative function, OBA-09 exerts anti-excitotoxic and anti-Zn²⁺-toxic functions, which might be attributed to attenuation of ATP and nicotinamide adenine dinucleotide depletion and to the suppression of nuclear factor- κ B activity induction. Together these results indicate that OBA-09 has a potent therapeutic potential as a multimodal neuroprotectant in the postischemic brain and these effects were conferred by OBA-09 itself and subsequently its hydrolyzed products.

References:

[1]. Kim SW, et al. Robust protective effects of a novel multimodal neuroprotectant oxopropanoyloxy benzoic acid (a salicylic acid/pyruvate ester) in the postischemic brain. *Mol Pharmacol.* 2011 Feb;79(2):220-8.

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