

Product Data Sheet

Product Name: Dafadine-A

Cat. No.: GC35803

Chemical Properties

Cas. No. 1065506-69-5

SMILES O=C(N1CCC(C2=CC=NC=C2)CC1)C3=NOC(COC4=C(C)C=CC=C4C)=C3

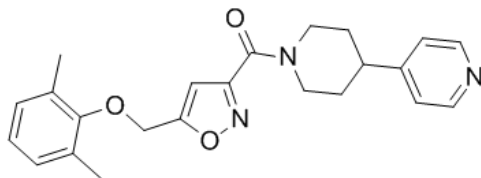
Formula $C_{23}H_{25}N_3O_3$ M.Wt 391.46

Solubility DMSO: 50 mg/mL (127.73 mM) 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

Dafadine-A, an analog of dafadine, is a novel inhibitor of DAF-9 cytochrome P450 in the nematode *Caenorhabditis elegans*; also inhibits the mammalian ortholog of DAF-9 (CYP27A1). IC50 value: Target: DAF-9 (CYP27A1) inhibitor. The DAF-9 cytochrome P450 is a key regulator of dauer formation, developmental timing and longevity in the nematode *Caenorhabditis elegans*. Here we describe the first identified chemical inhibitor of DAF-9 and the first reported small-molecule tool that

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

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robustly induces dauer formation in typical culture conditions. This molecule (called dafadine) also inhibits the mammalian ortholog of DAF-9(CYP27A1), suggesting that dafadine can be used to interrogate developmental control and longevity in other animals.

[1]. Luciani GM, et al. Dafadine inhibits DAF-9 to promote dauer formation and longevity of *Caenorhabditis elegans*. *Nat Chem Biol*. 2011 Nov 6;7(12):891-3.

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