

Product Data Sheet

Product Name: Avobenzene-13C-d3

Cat. No.: GC48771

Chemical Properties

Cas. No. 2933758-47-3

SMILES CC(C)(C)C1=CC=C(C(CC(C2=CC=C(O[13C])([2H])([2H])[2H])C=C2)=O)=O)C=C1

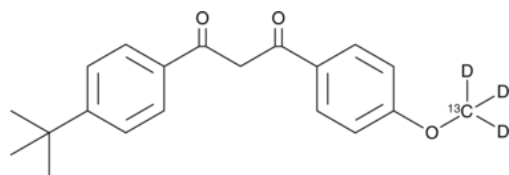
Formula C19[13C]H19D3O3 M.Wt 314.4

Solubility Acetonitrile: soluble, DMF: Storage -20°C
soluble, DMSO: soluble

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Avobenzene-¹³C-d₃ is intended for use as an internal standard for the quantification of avobenzene by GC- or LC-MS. Avobenzene is a full-spectrum ultraviolet A (UVA) blocker.¹ It inhibits UVA-induced increases in melanin levels and tyrosinase activity in B16/F10 melanoma cells (IC₅₀s = 21.94 and 24.25 μM, respectively).² Avobenzene (30 μM) also inhibits UVA-induced production of reactive oxygen species (ROS) and 8-hydroxy-2'-deoxyguanosine, as well as inhibits UVA-induced depletion of glutathione (GSH), in B16/F10 cells. It increases nuclear translocation of nuclear factor erythroid 2-related factor 2 (Nrf2) and upregulates the antioxidant response element (ARE) in UVA-irradiated B16/F10 cells when used at a concentration of 30 μM. Formulations containing avobenzene have been used as sun protectants in sunscreen products.

1. Beasley, D.G., and Meyer, T.A. Characterization of the UVA protection provided by avobenzene, zinc oxide, and titanium dioxide in broad-spectrum sunscreen products. *Am. J. Clin.*

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

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Dermatol.11(6)413-421(2010) 2.Chaiprasongsuk, A., Onkoksoon, T., Pluemsamran, T., et al. Photoprotection by dietary phenolics against melanogenesis induced by UVA through Nrf2-dependent antioxidant responses Redox Biol.879-90(2016)

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