

Product Data Sheet

Product Name: Diosmetin-d3

Cat. No.: GC47234

Chemical Properties

Cas. No. 1189728-54-8

SMILES O=C1C=C(C2=CC=C(OC([2H])([2H])[2H])C(O)=C2)OC3=CC(O)=CC(O)=C31

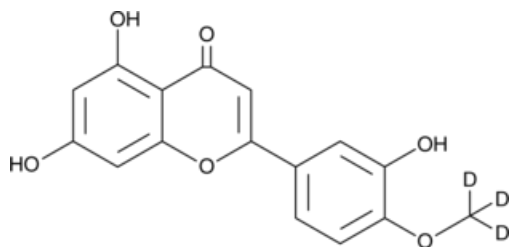
Formula C₁₆H₉D₃O₆ M.Wt 303.3

Solubility DMSO: slightly soluble, Methanol: slightly soluble 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

Diosmetin-d₃ is intended for use as an internal standard for the quantification of diosmetin by GC- or LC-MS. Diosmetin is a flavonoid that has been found in citrus fruits and has diverse biological activities.^{1,2,3,4} It inhibits the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1B1 (K_is = 89 and 16 nM, respectively).¹ Diosmetin prevents increases in erythrocyte reactive oxygen species (ROS) and malondialdehyde (MDA) levels induced by AAPH in a concentration-dependent manner.² It reduces tumor growth and tumor blood vessel density in a B16/F10 murine melanoma model when administered at a dose of 1 mg/kg twice per day.³ Diosmetin (0.5 mg/kg) inhibits lung goblet cell hyperplasia and collagen deposition and decreases the number of eosinophils and neutrophils in bronchoalveolar lavage fluid (BALF) in a mouse model of chronic asthma induced by ovalbumin.⁴

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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1.Androutsopoulos, V.P., Papakyriakou, A., Vourloumis, D., et al.Comparative CYP1A1 and CYP1B1 substrate and inhibitor profile of dietary flavonoidsBioorg. Med. Chem.19(9)2842-2849(2011) 2.Liao, W., Ning, Z., Chen, L., et al.Intracellular antioxidant detoxifying effects of diosmetin on 2,2-azobis(2-amidinopropane) dihydrochloride (AAPH)-induced oxidative stress through inhibition of reactive oxygen species generationJ. Agric. Food Chem.62(34)8648-8654(2014) 3.Choi, J., Lee, D.H., Park, S.Y., et al.Diosmetin inhibits tumor development and block tumor angiogenesis in skin cancerBiomed. Pharmacother.117109091(2019) 4.Ge, A., Liu, Y., Zeng, X., et al.Effect of diosmetin on airway remodeling in a murine model of chronic asthmaActa Biochim. Biophys. Sin. (Shanghai)47(8)604-611(2015)

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