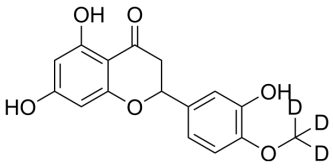
(Rac)-Hesperetin-d_3

Cat. No.:	HY-N0168AS
CAS No.:	1346605-26-2
Molecular Formula:	$C_{16}H_{11}D_3O_6$
Molecular Weight:	305.3
Target:	p38 MAPK; Apoptosis; Autophagy; Isotope-Labeled Compounds
Pathway:	MAPK/ERK Pathway; Apoptosis; Autophagy; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(Rac)-Hesperetin-d_3 is the deuterium labeled (Rac)-Hesperetin. (Rac)-Hesperetin is the racemate of Hesperetin. Hesperetin is a natural flavanone, and acts as a potent and broad-spectrum inhibitor against human UGT activity. Hesperetin induces apoptosis via p38 MAPK activation.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Arya A, et al. Bioflavonoid hesperetin overcome bicalutamide induced toxicity by co-delivery in novel SNEDDS formulations: Optimization, in vivo evaluation and uptake mechanism. Mater Sci Eng C Mater Biol Appl. 2017 Feb 1;71:954-964

[3]. Liu D, et al. Inhibitory Effect of Hesperetin and Naringenin on Human UDP-Glucuronosyltransferase Enzymes: Implications for Herb-Drug Interactions. Biol Pharm Bull. 2016;39(12):2052-2059.

[4]. Shagirtha K, et al. Neuroprotective efficacy of hesperetin against cadmium induced oxidative stress in the brain of rats. Toxicol Ind Health. 2016 Nov 1. pii: 0748233716665301

[5]. Li Q, et al. Hesperetin Induces Apoptosis in Human Glioblastoma Cells via p38 MAPK Activation. Nutr Cancer. 2019 Jul 11:1-8.

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