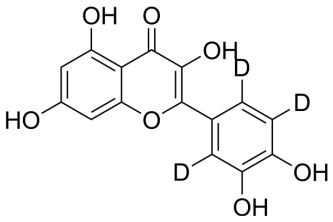
Quercetin-d_3

Cat. No.:	HY-18085S1
CAS No.:	263711-79-1
Molecular Formula:	$C_{15}H_7D_3O_7$
Molecular Weight:	305.25
Target:	PI3K; Apoptosis; Autophagy; Mitophagy; Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	PI3K/Akt/mTOR; Apoptosis; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Quercetin-d_3 is the deuterium labeled Quercetin. Quercetin, a natural flavonoid, is a stimulator of recombinant SIRT1 and also a PI3K inhibitor with IC50 of 2.4 μM, 3.0 μM and 5.4 μM for PI3K γ, PI3K δ and PI3K β, respectively[1].
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]. Yu XB, et al. Inhibitory effects of protein kinase C inhibitors on tumor necrosis factor induced bovine pulmonary artery endothelial cell injuries. Yao Xue Xue Bao. 1996;31(3):176-81.

[3]. Yang F, et al. Combination of Quercetin and 2-Methoxyestradiol Enhances Inhibition of Human Prostate Cancer LNCaP and PC-3 Cells Xenograft Tumor Growth. PLoS One. 2015 May 26;10(5):e0128277.

[4]. Leyre Navarro-Núñez, et al. Effect of quercetin on platelet spreading on collagen and fibrinogen and on multiple platelet kinases. Fitoterapia. 2010 Mar;81(2):75-80.

[5]. Tao Liu, et al. Quercetin alleviates kidney fibrosis by reducing renal tubular epithelial cell senescence through the SIRT1/PINK1/mitophagy axis. Life Sci. 2020 Jul 20;118116.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA