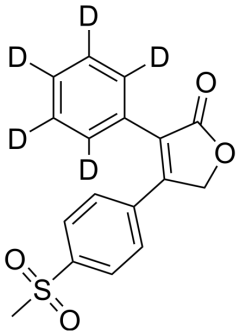
Rofecoxib-d_5

Cat. No.:	HY-17372S
CAS No.:	544684-93-7
Molecular Formula:	$C_{17}H_9D_5O_4S$
Molecular Weight:	319.39
Target:	COX; Isotope-Labeled Compounds
Pathway:	Immunology/Inflammation; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Rofecoxib-d_5 is the deuterium labeled Rofecoxib. Rofecoxib is a potent, specific and orally active COX-2 inhibitor, with IC50s of 26 and 18 nM for human COX-2 in human osteosarcoma cells and Chinese hamster ovary cells, with a 1000-fold selectivity for COX-2 over human COX-1 (IC50 > 50 μM in U937 cells and > 15 μM in Chinese hamster ovary cells)[1][2].
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]. Rofecoxib, et al. Rofecoxib [Vioxx, MK-0966; 4-(4'-methylsulfonylphenyl)-3-phenyl-2-(5H)-furanone]: a potent and orally active cyclooxygenase-2 inhibitor. Pharmacological and biochemical profiles. J Pharmacol Exp Ther. 1999 Aug;290(2):551-60.

[3]. Liu NN, et al. Rofecoxib inhibits retinal neovascularization via down regulation of cyclooxygenase-2 and vascular endothelial growth factor expression. Clin Exp Ophthalmol. 2015 Jul;43(5):458-65.

[4]. Stoppoloni D, et al. Synergistic effect of gefitinib and rofecoxib in mesothelioma cells. Mol Cancer. 2010 Feb 2;9:27.

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