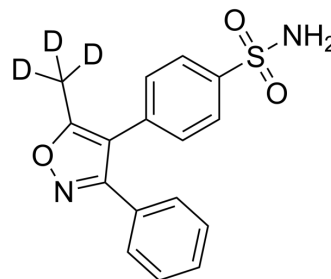


Valdecoxib-d₃

Cat. No.:	HY-15762S
CAS No.:	1219794-90-7
Molecular Formula:	C ₁₆ H ₁₁ D ₃ N ₂ O ₃ S
Molecular Weight:	317.38
Target:	COX; Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Valdecoxib-d ₃ is the deuterium labeled Valdecoxib. Valdecoxib is a highly potent and selective inhibitor of COX-2, with IC50s of 5 nM and 140 μM for COX-2 and COX-1, respectively. Valdecoxib can be used in the research of arthritis and pain[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]. Talley JJ, et al. 4-[5-Methyl-3-phenylisoxazol-4-yl]- benzenesulfonamide, valdecoxib: a potent and selective inhibitor of COX-2. *J Med Chem*. 2000 Mar 9;43(5):775-7.
- [3]. Wiktorowska-Owczarek A. The effect of valdecoxib on the production of growth factors evoked by hypoxia and bacterial lipopolysaccharide in HMEC-1 cells. *Adv Clin Exp Med*. 2013 Nov-Dec;22(6):795-800.
- [4]. Kumar A, et al. Protective effects of selective and non-selective cyclooxygenase inhibitors in an animal model of chronic stress. *Neurosci Bull*. 2010 Feb;26(1):17-27.

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

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