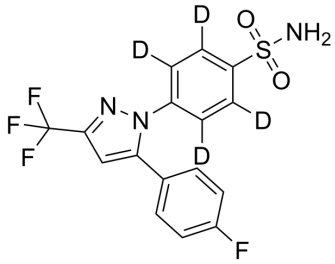
Mavacoxib-d_4

Cat. No.:	HY-119447S
Molecular Formula:	$C_{16}H_7D_4F_4N_3O_2S$
Molecular Weight:	389.36
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	Mavacoxib-d_4 is the deuterium labeled Mavacoxib. Mavacoxib is a selective, oral long-acting cyclooxygenase-2 (COX-2) inhibitor and a long-acting non-steroidal anti-inflammatory drug (NSAID). Mavacoxib is used to treat pain and inflammation associated with degenerative joint disease in dogs[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]. Hurst EA, et al. The selective cyclooxygenase-2 inhibitor mavacoxib (Trocoxil) exerts anti-tumour effects in vitro independent of cyclooxygenase-2 expression levels. Vet Comp Oncol. 2019 Jun;17(2):194-207.

[3]. Cox SR, et al. Population pharmacokinetics of mavacoxib in osteoarthritic dogs. J Vet Pharmacol Ther. 2011 Feb;34(1):1-11.

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