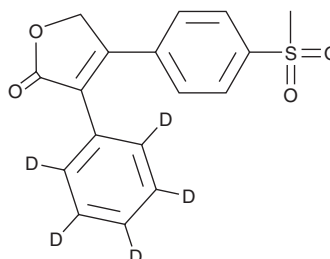


PRODUCT INFORMATION



Rofecoxib-d₅ Item No. 28900

CAS Registry No.: 544684-93-7
Formal Name: 4-[4-(methylsulfonyl)phenyl]-3-(phenyl-d₅)-2(5H)-furanone
MF: C₁₇H₉D₅O₄S
FW: 319.4
Chemical Purity: ≥98% (Rofecoxib)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Rofecoxib-d₅ is intended for use as an internal standard for the quantification of rofecoxib (Item No. 10010260) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Rofecoxib-d₅ is supplied as a solid. A stock solution may be made by dissolving the rofecoxib-d₅ in the solvent of choice, which should be purged with an inert gas. Rofecoxib-d₅ is soluble in organic solvents such as DMSO and acetonitrile.

Description

Rofecoxib is a non-steroidal anti-inflammatory drug (NSAID) that selectively inhibits COX-2 over COX-1 with IC₅₀ values of 0.018 and >15 μM, respectively, for production of prostaglandin E₂ (PGE₂; Item No. 14010) in CHO cells expressing the recombinant human enzymes.¹ *In vivo*, rofecoxib inhibits carrageenan-induced paw edema and hyperalgesia (ID₅₀s = 1.5 and 1.0 mg/kg, respectively), LPS-induced pyresis (ID₅₀ = 0.24 mg/kg), and *M. butyricum*-induced arthritis (ID₅₀ = 0.74 mg/kg per day) in rats. Formulations containing rofecoxib were previously used in the treatment of pain and arthritis.

Reference

1. Chan, C.C., Boyce, S., Brideau, C., *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.* **290**(2), 551-560 (1999).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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