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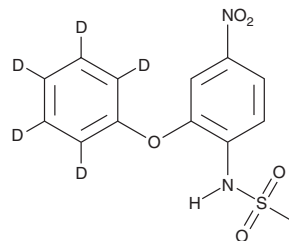
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PRODUCT INFORMATION



Nimesulide-d₅ Item No. 33813

CAS Registry No.: 1330180-22-7
Formal Name: N-(4-nitro-2-(phenoxy-d₅)phenyl)methanesulfonamide
Synonym: R805-d₅
MF: C₁₃H₇D₅N₂O₅S
FW: 313.3
Chemical Purity: ≥98% (Nimesulide)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Nimesulide-d₅ is intended for use as an internal standard for the quantification of nimesulide (Item No. 70640) 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).

Nimesulide-d₅ is supplied as a solid. A stock solution may be made by dissolving the nimesulide-d₅ in the solvent of choice, which should be purged with an inert gas. Nimesulide-d₅ is soluble in methanol.

Description

Nimesulide is a non-steroidal anti-inflammatory drug (NSAID) and COX-2 inhibitor (IC₅₀s = 1.27 and 0.03 μM for the human and ovine enzymes, respectively).^{1,2} It is selective for COX-2 over COX-1 (IC₅₀s = 70 and 22 μM for the human and ovine enzymes, respectively). Nimesulide also inhibits sodium-dependent neutral amino acid transporter (B⁰AT1) with an IC₅₀ value of 23 μM for the rat kidney transporter.³ It inhibits infection-induced increases in brain prostaglandin E₂ (PGE₂; Item No. 14010) levels, as well as reduces pyresis (ED₅₀ = 0.3 mg/kg), in yeast-infected rats.⁴ Nimesulide (2.9 mg/kg) inhibits formalin-induced hindpaw thermal hyperalgesia in rats.⁵

References

1. Johnson, J.L., Wimsatt, J., Buckel, S.D., *et al.* Purification and characterization of prostaglandin H synthase-2 from sheep placental cotyledons. *Arch. Biochem. Biophys.* **324**(1), 26-34 (1995).
2. Barnett, J., Chow, J., Ives, D., *et al.* Purification, characterization and selective inhibition of human prostaglandin G/H synthase 1 and 2 expressed in the baculovirus system. *Biochim. Biophys. Acta* **1209**(1), 130-139 (1994).
3. Pochini, L., Seidita, A., Sensi, C., *et al.* Nimesulide binding site in the B⁰AT1 (SLC6A19) amino acid transporter. Mechanism of inhibition revealed by proteoliposome transport assay and molecular modelling. *Biochem. Pharmacol.* **89**(3), 422-430 (2014).
4. Taniguchi, Y., Yokoyama, K., Inui, K., *et al.* Inhibition of brain cyclooxygenase-2 activity and the antipyretic action of nimesulide. *Eur. J. Pharmacol.* **330**(2-3), 221-229 (1997).
5. Bianchi, M. and Brogгинi, M. Anti-hyperalgesic effects of nimesulide: Studies in rats and humans. *Int. J. Clin. Pract. Suppl.* **(128)**, 11-19 (2002).

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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