
Product Data Sheet

Product Name: Nimesulide D5

Cat. No.: GC39583

Chemical Properties

Cas. No. 1330180-22-7

SMILES CS(=O)(NC1=CC=C([N+])([O-])=O)C=C1OC2=C([2H])C([2H])=C([2H])C([2H])=C2[2H])=O

Formula	C ₁₃ H ₇ D ₅ N ₂ O ₅ S	M.Wt	313.34
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Solubility	Methanol: soluble	Storage	Store at -20°C
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General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Nimesulide-d₅ is intended for use as an internal standard for the quantification of nimesulide by GC- or LC-MS. 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 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

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

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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)21-229(1997)

5. Bianchi, M., and Broggin, M. Anti-hyperalgesic effects of nimesulide: Studies in rats and humans *Int. J. Clin. Pract. Suppl.* 57(128)11-19(2002)

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