
Product Data Sheet

Product Name: Mefenamic acid D4

Cat. No.: GC61038

Chemical Properties

Cas. No. 1216745-79-7

SMILES O=C(O)C1=C(NC2=CC=CC(C)=C2C)C([2H])=C([2H])C([2H])=C1[2H]Formula $C_{15}H_{11}D_4NO_2$ M.Wt 245.31Solubility DMSO : ≥ 100 mg/mL (407.65 mM); H₂O : 0.1 mg/mL (0.41 mM; Need ultrasonic) Storage Store at -20°C

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

Mefenamic acid-d₄ is intended for use as an internal standard for the quantification of mefenamic acid by GC- or LC-MS. Mefenamic acid is a non-steroidal anti-inflammatory drug (NSAID) and a COX-2 inhibitor.¹ It binds to COX-2 ($K_D = 4$ nM) and inhibits COX-2-dependent oxygenation of arachidonic acid *in vitro* ($K_i = 10$?M). Mefenamic acid (30 mg/kg) reduces acetic acid-induced writhing in rats.² It inhibits increases in skin thickness in a mouse model of delayed-type hypersensitivity induced by dinitrochlorobenzene (DNBC).² Mefenamic acid also reduces the antibody response to sheep red blood cells in mice.

1. Prusakiewicz, J.J., Duggan, K.C., Rouzer, C.A., et al. Differential sensitivity and mechanism of inhibition of COX-2 oxygenation of arachidonic acid and 2-arachidonoylglycerol by ibuprofen and mefenamic acid *Biochemistry* 48(31)7353-7355(2009)
 2. Roszkowski, A.P., Rooks, W.H., Tomolonis, A.J., et al. Anti-inflammatory and analgetic properties of d-2-(6'-methoxy-2'-naphthyl)-propionic acid (naproxen) *J.*

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

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Pharmacol. Exp. Ther.179(1)114-123(1971)

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