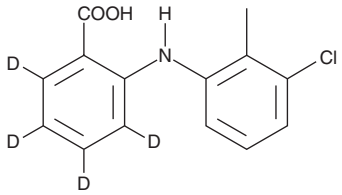
PRODUCT INFORMATION

Tolfenamic Acid-d_4

Item No. 28700

CAS Registry No.:	1246820-82-5
Formal Name:	2-[(3-chloro-2-methylphenyl)amino]-benzoic acid-d_4
MF:	$C_{14}H_8ClD_4NO_2$
FW:	265.7
Chemical Purity:	≥98% (Tolfenamic Acid)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
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

Tolfenamic acid-d_4 is intended for use as an internal standard for the quantification of tolfenamic acid (Item No. 70480) 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).

Tolfenamic acid-d_4 is supplied as a solid. A stock solution may be made by dissolving the tolfenamic acid-d_4 in the solvent of choice, which should be purged with an inert gas. Tolfenamic acid-d_4 is soluble in methanol, DMSO, and dimethyl formamide.

Description

Tolfenamic acid-d_4 is intended for use as an internal standard for the quantification of tolfenamic acid (Item No. 70480) by GC- or LC-MS. Tolfenamic acid is a non-steroidal anti-inflammatory drug (NSAID) with anticancer activity.[1-5] It is selective for COX-2 over COX-1 in canine DH82 monocyte/macrophage cells (IC_{50}s = 3.53 and >51.2 µg/ml, respectively).[1] Tolfenamic acid inhibits calcium influx in human polymorphonuclear leukocytes (PMNLs) induced by N-formyl-L-methionyl-L-leucyl-L-phenylalanine (fMLP; Item No. 21495) or the calcium ionophore A23187 (Item Nos. 11016 | 22030) in a concentration-dependent manner.[2] It decreases protein levels of the transcription factors Sp1, Sp3, and Sp4 in PANC-1 and L3.6pl cells when used at a concentration of 50 µM and inhibits proliferation of PANC-1, L3.6pl, and PANC-28 cells in a concentration-dependent manner.[4] Tolfenamic acid (50 and 100 µM) decreases the viability of and induces apoptosis in MDA-MB-231 cells.[5] It reduces tumor growth in an MDA-MB-231 mouse xenograft model when administered at doses of 25 and 50 mg/kg. Tolfenamic acid (150 µmol/kg) reduces carrageenan-induced paw edema in mice by 24%.[3]

Reference

1. Kay-Mugford, P., Benn, S.J., LaMarre, J., *et al. Am. J. Vet. Res.* **61(7),** 802-810 (2000).
2. Kankaanranta, H. and Moilanen, E. *Mol. Pharmacol.* **47(5),** 1006-1013 (1995).
3. Galanakis, D., Kourounakis, A.P., Tsiakitzis, K.C., *et al. Bioorg. Med. Chem. Lett.* **14(14),** 3639-3643 (2004).
4. Abdelrahim, M., Baker, C.H., Abbruzzese, J.L., *et al. J. Natl. Cancer Inst.* **98(12),** 855-868 (2006).
5. Kim, H.J., Cho, S.D., Kim, J., *et al. J. Clin. Biochem. Nutr.* **52(1),** 21-26 (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM