

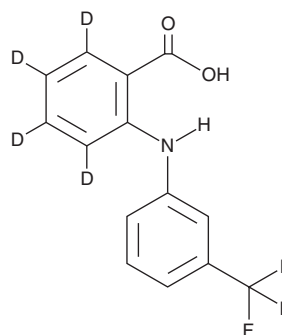
# PRODUCT INFORMATION



## Flufenamic Acid-d<sub>4</sub>

Item No. 33272

<b>CAS Registry No.:</b>	1185071-99-1
<b>Formal Name:</b>	2-[[3-(trifluoromethyl)phenyl]amino]- benzoic acid-d <sub>4</sub>
<b>Synonyms:</b>	FFA-d <sub>4</sub> , Fluphenamic Acid-d <sub>4</sub>
<b>MF:</b>	C <sub>14</sub> H <sub>6</sub> D <sub>4</sub> F <sub>3</sub> NO <sub>2</sub>
<b>FW:</b>	285.3
<b>Chemical Purity:</b>	≥98% (Flufenamic Acid)
<b>Deuterium</b>	
<b>Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>4</sub> ); ≤1% d <sub>0</sub>
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



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

### Laboratory Procedures

Flufenamic acid-d<sub>4</sub> is intended for use as an internal standard for the quantification of flufenamic acid (Item No. 21447) 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).

Flufenamic acid-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the flufenamic acid-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Flufenamic acid-d<sub>4</sub> is soluble in organic solvents such as methanol, DMSO, and dimethyl formamide.

### Description

Flufenamic acid is a non-steroidal anti-inflammatory drug (NSAID) and COX inhibitor (IC<sub>50</sub>s = 3 and 9.3 μM for human COX-1 and COX-2, respectively).<sup>1</sup> Flufenamic acid inhibits TNF-α-induced increases in COX-2 levels and NF-κB activation in HT-29 colon cancer cells in a concentration-dependent manner.<sup>2</sup> It inhibits calcium influx induced by fMLP (fMLF; Item No. 21495) or A23187 (Item No. 11016) in human polymorphonuclear leukocytes (PMN) with IC<sub>50</sub> values of 29 and 14 μM, respectively.<sup>3</sup> Flufenamic acid also activates various ion channels, including transient receptor potential canonical 6 (TRPC6) and the large-conductance calcium-activated potassium channel (K<sub>Ca</sub>1.1).<sup>4</sup> It also inhibits various ion channels, including TRPC3 and the cystic fibrosis transmembrane conductance regulator (CFTR). Flufenamic acid (20 mg/kg) reduces increases in intestinal fluid secretion and intestinal barrier disruption in mice infected with the El Tor variant of *V. cholerae*.<sup>5</sup>

### References

1. Warner, T.D., Giuliano, F., Vojnovic, I., et al. *Proc. Nat. Acad. Sci. USA* **96**(13), 7563-7568 (1999).
2. Paik, J.H., Ju, J.H., Lee, J.Y., et al. *J. Biol. Chem.* **275**(36), 28173-28179 (2000).
3. Kankaanranta, H. and Moilanen, E. *Mol. Pharmacol.* **47**(5), 1006-1013 (1995).
4. Guinamard, R., Simard, C., and Del Negro, C. *Pharmacol. Ther.* **138**(2), 272-284 (2013).
5. Pongkorpsakol, P., Satitsri, S., Wongkrasant, P., et al. *Eur. J. Pharmacol.* **798**, 94-104 (2017).

#### 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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