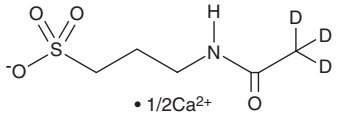
PRODUCT INFORMATION

Acamprosate-d_3 (calcium salt)

Item No. 26780

CAS Registry No.: 1225580-94-8
Formal Name: 3-(acetyl-2,2,2-d_3-amino)-1-propanesulfonic acid, hemicalcium salt (2:1)
Synonyms: N-acetyl Homotaurinate-d_3, N-acetyl Homotaurine-d_3
MF: $C_5H_7D_3NO_4S \bullet 1/2Ca$
FW: 203.3
Chemical Purity: ≥98% (Acamprosate)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤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

Acamprosate-d_3 (calcium salt) is intended for use as an internal standard for the quantification of acamprosate (Item No. 23899) 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).

Description

Acamprosate is an acetylated derivative of the GABA analog homotaurine (tramiprosate; Item No. 20701).[1] Despite its structural similarity to GABA, acamprosate does not act at $GABA_A$ receptors but does decrease paired-pulse inhibition of $GABA_A$ inhibitory post-synaptic currents (IPSCs) at short inter-stimulus intervals when used at a concentration of 300 µM, indicating that it may inhibit $GABA_B$ autoreceptor-mediated inhibition of GABA release.[2-4] It is an NMDA receptor modulator with antagonist or agonist effects depending on brain region, receptor subunit composition, and other factors.[4] Acamprosate (0.26 and 0.52 mmol/kg per day, i.p.) reduces voluntary intake of ethanol in rats, an effect that can be blocked by the GABA antagonist bicuculline (Item No. 11727). Formulations containing acamprosate have been used for the maintenance of alcohol abstinence.

References

1. Boismare, F., Daoust, M., Moore, N., *et al. Pharmacol. Biochem. Behav.* **21(5)**, 787-789 (1984).
2. Reilly, M.T., Lobo, I.A., McCracken, L.M., *et al. Alcohol. Clin. Exp. Res.* **32(2)**, 188-196 (2008).
3. Berton, F., Francesconi, W.G., Madamba, S.G., *et al. Alcohol Clin. Exp. Res.* **22(1)**, 183-191 (1998).
4. Tomek, S.E., Lacrosse, A.L., Nemirovsky, N.E., *et al. Pharmaceuticals (Basel)* **6(2)**, 251-268 (2013).

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