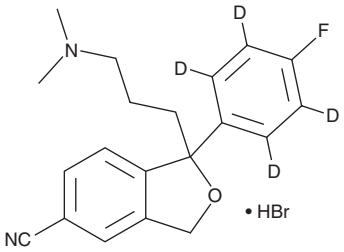
PRODUCT INFORMATION

Citalopram-d_4 (hydrobromide)

Item No. 22102

CAS Registry No.: 1219803-58-3
Formal Name: 1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl-d_4)-1,3-dihydro-5-isobenzofurancarbonitrile, monohydrobromide
Synonyms: Bonitrile-d_4, Nitalapram-d_4, Prepram-d_4
MF: $C_{20}H_{17}D_4FN_2O \bullet HBr$
FW: 409.3
Chemical Purity: ≥98% (Citalopram)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

Citalopram-d_4 (hydrobromide) is intended for use as an internal standard for the quantification of citalopram (Item No. 14572) 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).

Citalopram-d_4 (hydrobromide) is supplied as a solid. A stock solution may be made by dissolving the citalopram-d_4 (hydrobromide) in the solvent of choice. Citalopram-d_4 (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of citalopram-d_4 (hydrobromide) in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Citalopram is a selective serotonin reuptake inhibitor which is commonly prescribed as an antidepressant.[1-3] It also acts as an antagonist of nicotinic acetylcholine receptors (IC_{50} = 0.93 µM).[4]

References

1. Milan, M.J., Gobert, A., Rivet, J.-M., *et al*. Mirtazapine enhances frontocortical dopaminergic and corticolimbic adrenergic, but not serotonergic, transmission by blockade of α_2-adrenergic and serotonin$_{2C}$ receptors: A comparison with citalopram. *Eur. J. Neurosci.* **12(3)**, 1079-1095 (2000).
2. Boothman, L.J., Mitchell, S.N., and Sharp, T. Investigation of the SSRI augmentation properties of 5-HT_2 receptor antagonists using *in vivo* microdialysis. *Neuropharmacology* **50(6)**, 726-732 (2006).
3. Bymaster, F.P., Zhang, W., Carter, P.A., *et al*. Fluoxetine, but not other selective serotonin uptake inhibitors, increases norepinephrine and dopamine extracellular levels in prefrontal cortex. *Psychopharmacology (Berl)* **160(4)**, 353-361 (2002).
4. Shytle, R.D., Silver, A.A., Lukas, R.J., *et al*. Nicotinic acetylcholine receptors as targets for antidepressants. *Mol. Psychiatry* **7(6)**, 525-535 (2002).

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.

WARRANTY AND LIMITATION OF REMEDY
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