

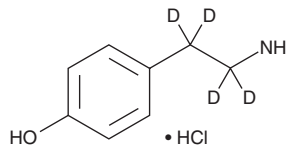
PRODUCT INFORMATION



Tyramine-d₄ (hydrochloride)

Item No. 28531

CAS Registry No.: 1189884-47-6
Formal Name: 4-(2-aminoethyl-1,1,2,2-d₄)-phenol, monohydrochloride
Synonyms: 2-(4-Hydroxyphenyl)ethylamine-d₄, p-Tyramine-d₄, Uteramine-d₄
MF: C₈H₇D₄NO • HCl
FW: 177.7
Chemical Purity: ≥98% (Tyramine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

Tyramine-d₄ (hydrochloride) is intended for use as an internal standard for the quantification of tyramine (Item No. 18601) 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).

Tyramine-d₄ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the tyramine-d₄ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Tyramine-d₄ (hydrochloride) is slightly soluble in DMSO and methanol.

Description

Tyramine is a tyrosine-derived endogenous and dietary monoamine and trace amine-associated receptor 1 (TAAR1) agonist.¹⁻³ It activates TAAR1 (EC₅₀s = 0.08, 0.69, and 2.26 μM for rat, mouse, and human-rat chimera receptors, respectively).¹ Tyramine also inhibits the release of norepinephrine and dopamine in isolated rat caudate nucleus (IC₅₀s = 40.6 and 119 nM, respectively).⁴

References

1. Reese, E.A., Bunzow, J.R., Arttamangkul, S., *et al.* Trace amine-associated receptor 1 displays species-dependent stereoselectivity for isomers of methamphetamine, amphetamine, and para-hydroxyamphetamine. *J. Pharmacol. Exp. Ther.* **321(1)**, 178-186 (2007).
2. Zucchi, R., Chiellini, G., Scanlan, T.S., *et al.* Trace amine-associated receptors and their ligands. *Br. J. Pharmacol.* **149(8)**, 967-978 (2006).
3. Maguire, J.J., Parker, W.A.E., Foord, S.M., *et al.* International Union of Pharmacology. LXXII. Recommendations for trace amine receptor nomenclature. *Pharmacol. Rev.* **61(1)**, (2009).
4. Rothman, R.B., Baumann, M.H., Dersch, C.M., *et al.* Amphetamine-type central nervous system stimulants release norepinephrine more potently than they release dopamine and serotonin. *Science* **39(1)**, 32-41 (2001).

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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