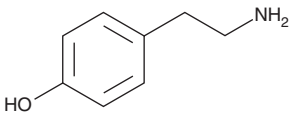
PRODUCT INFORMATION

Tyramine

Item No. 18601

CAS Registry No.: 51-67-2
Formal Name: 4-(2-aminoethyl)-phenol
Synonyms: 2-(4-Hydroxyphenyl)ethylamine, NSC 249188, *p*-Tyramine, Uteramine
MF: $C_8H_{11}NO$
FW: 137.2
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 278 nm
Supplied as: A crystalline 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

Tyramine is supplied as a crystalline solid. A stock solution may be made by dissolving the tyramine in the solvent of choice. Tyramine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of tyramine in these solvents is approximately 5, 20, and 25 mg/ml, respectively.

Tyramine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tyramine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Tyramine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tyramine is a tyrosine-derived endogenous and dietary monoamine and trace amine-associated receptor 1 (TAAR1) agonist.[1-3] It activates TAAR1 (EC_{50}s = 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 (IC_{50}s = 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).

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