

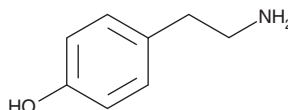
# PRODUCT INFORMATION



## 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<sub>8</sub>H<sub>11</sub>NO  
**FW:** 137.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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.<sup>1-3</sup> It activates TAAR1 (EC<sub>50</sub>s = 0.08, 0.69, and 2.26 μM for rat, mouse, and human-rat chimera receptors, respectively).<sup>1</sup> Tyramine also inhibits the release of norepinephrine and dopamine in isolated rat caudate nucleus (IC<sub>50</sub>s = 40.6 and 119 nM, respectively).<sup>4</sup>

### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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