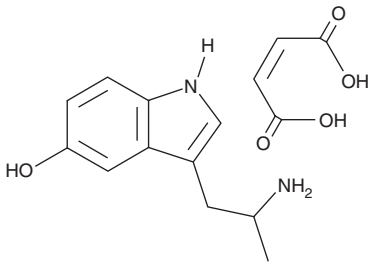
PRODUCT INFORMATION

α-methyl Serotonin (maleate)

Item No. 28542

CAS Registry No.:	97469-12-0
Formal Name:	3-(2-aminopropyl)-1H-indol-5-ol, (2Z)-2-butenedioate
Synonyms:	α-Me-5-HT, α-Methyl-5-HT, α-Methyl-5-hydroxytryptamine, α-Methylserotonin
MF:	$C_{11}H_{14}N_2O \bullet C_4H_4O_4$
FW:	306.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 276, 302 nm
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

α-methyl Serotonin (maleate) is supplied as a solid. A stock solution may be made by dissolving the α-methyl serotonin (maleate) in the solvent of choice, which should be purged with an inert gas. α-methyl Serotonin (maleate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of α-methyl serotonin (maleate) in these solvents is approximately 25 and 16 mg/ml, respectively. α-methyl Serotonin (maleate) is slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of α-methyl serotonin (maleate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of α-methyl serotonin (maleate) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

α-methyl Serotonin is an agonist of serotonin (5-HT) receptors.[1,2] It binds selectively to 5-HT_{1A}, 5-HT_{1B}, 5-HT_{1C}, and 5-HT_{1D} receptors over 5-HT_{1E} receptors (K_is = 42, 85, 150, 150, and >10,000 nM, respectively).[1] It is also selective for 5-HT_{2B} and 5-HT_{2C} receptors over 5-HT_{2A} receptors (EC_{50}s = 2.98, 50.1, and 794 nM, respectively).[2] α-methyl Serotonin (30 µM) potentiates motor neuron depolarizations induced by NMDA (Item No. 14581) in the presence of the NMDA receptor antagonist memantine (Item No. 14184) in *R. pipiens* (frog) spinal cord *ex vivo*.[3] It also increases dopamine release from rat striatum *in vivo* in a dose-dependent manner.[4] α-methyl Serotonin (64 µg/kg) increases systolic blood pressure and transiently increases heart rate in conscious dogs.[5]

References

1. Ismaiel, A.M., Titeler, M., Miller, K.J., *et al. J. Med. Chem.* **33(2),** 755-758 (1990).
2. Baxter, G., Kennett, G., Blaney, F., *et al. Trends Pharmacol. Sci.* **16(3)**, 105-110 (1995).
3. Holohean, A.M. and Hackman, J.C. *Br. J. Pharmacol.* **143(3)**, 351-360 (2004).
4. Santiago, M., Matarredona, E.R., Machado, A., *et al. J. Neurosci. Res.* **52(5)**, 591-598 (1998).
5. Wilson, H., Coffman, W.J., and Cohen, M.L. *J. Pharmacol. Exp. Ther.* **252(2),** 683-688 (1990).

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