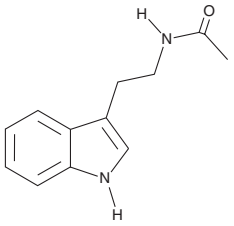
# PRODUCT INFORMATION

## N-acetyl Tryptamine

*Item No. 18605*

**CAS Registry No.:** 1016-47-3
**Formal Name:** N-[2-(1H-indol-3-yl)ethyl]-acetamide
**MF:** $C_{12}H_{14}N_2O$
**FW:** 202.3
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 222, 282, 290 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

For long term storage, we suggest that N-acetyl tryptamine be stored as supplied at -20°C. It should be stable for at least two years.

N-acetyl Tryptamine is supplied as a crystalline solid. A stock solution may be made by dissolving the N-acetyl tryptamine in the solvent of choice. N-acetyl Tryptamine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of N-acetyl tryptamine in these solvents is approximately 20, 5, and 10 mg/ml, respectively.

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

### Description

N-acetyl Tryptamine is a structural analog of melatonin (5-methoxy-N-acetyltryptamine; Item No. 14427) that binds the melatonin $MT_2$ receptor ($K_i$ = 41 nM).[1] It acts as a melatonin receptor antagonist in frog skin and chicken retina and as a partial agonist in rabbit retina.[2-4] N-acetyl Tryptamine is also a reaction product of assays for serotonin N-acetyltransferase, the penultimate enzyme in the melatonin biosynthetic pathway.[5]

### References


1. Sugden, D., Pickering, H., Teh, M.T., *et al.* Melatonin receptor pharmacology: Toward subtype specificity. *Biol. Cell* **89(8)**, 531-537 (1997).
2. Dubocovich, M.L. Characterization of a retinal melatonin receptor. *J. Pharmacol. Exp. Ther.* **234(2)**, 395-401 (1985).
3. Nonno, R., Pannacci, M., Lucini, V., *et al.* Ligand efficacy and potency at recombinant human $MT_2$ melatonin receptors: Evidence for agonist activity of some $mt_1$-antagonists. *Br. J. Pharmacol.* **127(5)**, 1288-1294 (2016).
4. Dubocovich, M.L., Masana, M.I., Iacob, S., *et al*. Melatonin receptor antagonists that differentiate between the human $Mel_{1a}$ and $Mel_{1b}$ recombinant subtypes are used to assess the pharmacological profile of the rabbit retina $ML_1$ presynaptic heteroreceptor. *Naunyn Schmiedebergs Arch. Pharmacol.* **355(3)**, 365-375 (1997).
5. DeAngelis, J., Gastel, J., Klein, D.C., *et al.* Kinetic analysis of the catalytic mechanism of serotonin N-acetyltransferase (EC 2.3.1.87). *J. Biol. Chem.* **273(5)**, 3045-3050 (1998).





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