

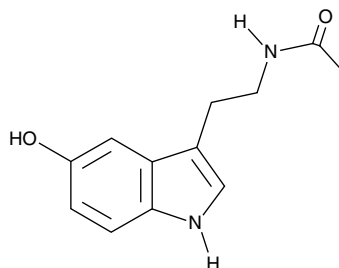
Product Information



N-Acetylserotonin

Item No. 14535

CAS Registry No.: 1210-83-9
Formal Name: N-[2-(5-hydroxy-1H-indol-3-yl)ethyl]-acetamide
Synonyms: N-Acetyl-5-hydroxytryptamine, NAS
MF: C₁₂H₁₄N₂O₂
FW: 218.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 224, 278 nm



Laboratory Procedures

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

NAS is supplied as a crystalline solid. A stock solution may be made by dissolving the NAS in the solvent of choice. NAS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of NAS in these solvents is approximately 10, 12.5, and 20 mg/ml, respectively.

NAS is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NAS should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NAS 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.

NAS is the immediate precursor of melatonin (Item No. 14427). It is produced from serotonin by the enzyme aralkylamine N-acetyltransferase and is converted to melatonin by acetylserotonin O-methyltransferase.¹ Like melatonin, NAS is considered to be a neurotransmitter and acts as an agonist at the melatonin receptors MT₁, MT₂, and MT₃.² NAS may also have unique central effects since it is distributed in specific brain areas separate from serotonin and melatonin.²

References

1. Chatteraj, A., Liu, T., Zhang, L.S., *et al.* Melatonin formation in mammals: *In vivo* perspectives. *Rev. Endocr. Metab. Disord.* **10**(4), 237-243 (2009).
2. Jang, S.-W., Liu, X., Pradoldej, S., *et al.* N-acetylserotonin activates TrkB receptor in a circadian rhythm. *Proc. Natl. Acad. Sci. USA* **107**(8), 3876-3881 (2010).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14535

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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