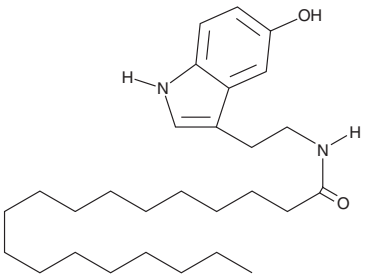
PRODUCT INFORMATION

Stearoyl Serotonin

Item No. 9000631

CAS Registry No.:	67964-87-8
Formal Name:	N-[2-(5-hydroxy-1H-indol-3-yl) ethyl]-octadecanamide
MF:	$C_{28}H_{46}N_2O_2$
FW:	442.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 279 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

Stearoyl serotonin is supplied as a crystalline solid. A stock solution may be made by dissolving the stearoyl serotonin in the solvent of choice, which should be purged with an inert gas. Stearoyl serotonin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of stearoyl serotonin in ethanol is approximately 2.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

Stearoyl serotonin is a hybrid molecule patterned after arachidonoyl serotonin (Item No. 70665). Arachidonoyl serotonin is a dual antagonist of fatty acid amide hydrolase (FAAH) and the transient receptor potential vanilloid-type 1 (TRPV1) channel, reducing both acute and chronic peripheral pain.[1,2] The effects of replacing the arachidonoyl portion with the saturated 18-carbon stearoyl moiety have not been studied. However, replacement of arachidonate with saturated 11- or 12-carbon fatty acids produces compounds that potently inhibit capsaicin-induced TRPV1 channel activation (IC_{50} = 0.76 µM) without blocking FAAH-mediated hydrolysis of arachidonoyl ethanolamine (IC_{50} > 50 µM).[1]

References

1. Ortar, G., Cascio, M.G., De Petrocellis, L., *et al.* New N-arachidonoylserotonin analogues with potential "dual" mechanism of action against pain. *J. Med. Chem.* **50(26)**, 6554-6569 (2007).
2. Maione, S., De Petrocellis, L., de Novellis, V., *et al.* Analgesic actions of N-arachidonoyl-serotonin, a fatty acid amide hydrolase inhibitor with antagonistic activity at vanilloid TRPV1 receptors. *Br. J. Pharmacol.* **150(6)**, 766-781 (2007).

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