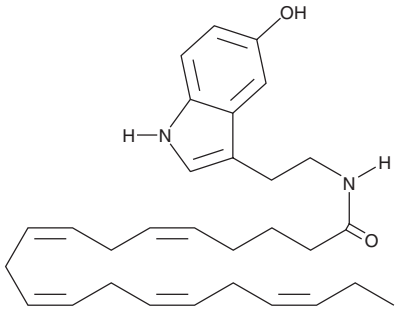
PRODUCT INFORMATION

Eicosapentaenoyl Serotonin

Item No. 9000640

CAS Registry No.: 199875-71-3
Formal Name: N-[2-(5-hydroxy-1H-indol-3-yl) ethyl]-5Z,8Z,11Z,14Z,17Z-eicosapentaenamide
MF: $C_{30}H_{40}N_2O_2$
FW: 460.7
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 278 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Eicosapentaenoyl serotonin is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of eicosapentaenoyl serotonin in these solvents is approximately 20 mg/ml.

Eicosapentaenoyl serotonin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of eicosapentaenoyl serotonin should be diluted with the aqueous buffer of choice. Eicosapentaenoyl serotonin has a solubility of approximately 0.33 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Eicosapentaenoyl 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 eicosapentaenoic acid 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 ethanolamide (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**, 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**, 766-781 (2007).

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