

Product Data Sheet

Product Name: Arachidonoyl amide

Cat. No.: GC16826

Chemical Properties

Cas. No. 85146-53-8

Chemical Name 5Z,8Z,11Z,14Z-eicosatetraenamide

SMILES CCCC/C=C\C/C=C\C/C=C\C/C=C\CCCC(=O)N

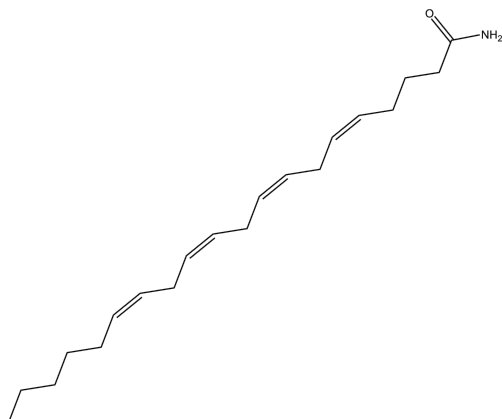
Formula $C_{20}H_{33}NO$ M.Wt 303.5

Solubility $\leq 10\text{mg/ml}$ in ethanol; 10mg/ml in DMSO; 10mg/ml in dimethyl formamide Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Arachidonoyl amide is a CB1 receptor agonist [1]. The cannabinoid receptor type 1, abbreviated as CB1, is a G protein-coupled cannabinoid receptor expressed primarily in the central and peripheral nervous system. CB1 receptor has been implicated in maintaining the homeostasis in health and disease. Overexpression of CB1 receptor has been found in human hepatocellular carcinoma tumor

Caution: Product has not been fully validated for medical applications. For research use only.

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samples and other human prostate cancer cells [2].

Arachidonoyl amide is an analog of anandamide (AEA) that lacks the hydroxyethyl moiety. It was hydrolyzed by FAAH more effectively than AEA but exhibited significantly weaker binding to the human CB1 receptor with a K_i of 9.6 μM [1]. Arachidonoyl amide exhibited similar binding and translocation into cells via the AEA transporter compared to AEA. Arachidonoyl amide inhibited [^3H]-AEA uptake into human astrocytoma cells with an IC_{50} of 9 μM [3].

References:

- [1] Felder C C, Briley E M, Axelrod J, et al. Anandamide, an endogenous cannabimimetic eicosanoid, binds to the cloned human cannabinoid receptor and stimulates receptor-mediated signal transduction[J]. Proceedings of the National Academy of Sciences, 1993, 90(16): 7656-7660.
- [2] Pertwee R G. The diverse CB1 and CB2 receptor pharmacology of three plant cannabinoids: Δ^9 -tetrahydrocannabinol, cannabidiol and Δ^9 -tetrahydrocannabivarin[J]. British journal of pharmacology, 2008, 153(2): 199-215.
- [3] Piomelli, D. ,Beltramo, M.,Glasnapp, S., et al. Structural determinants for recognition and translocation by the anandamide transporter. Proceedings of the National Academy of Sciences of the United States of America 96, 5802-5807 (1999).

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