

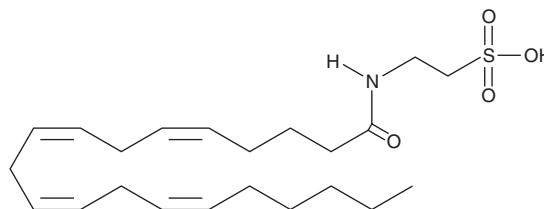
PRODUCT INFORMATION



N-Arachidonoyl Taurine

Item No. 10005537

CAS Registry No.: 119959-65-8
Formal Name: 2-[[1-oxo-5Z,8Z,11Z,14Z-eicosatetraenyl) amino]-ethane sulfonic acid
MF: $C_{22}H_{37}NO_4S$
Purity: $\geq 98\%$
Supplied as: A crystalline solid
Storage: $-80^{\circ}C$
Stability: ≥ 2 years



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

Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of N-arachidonoyl taurine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N-arachidonoyl taurine in PBS, pH 7.2, is approximately 1.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N-Arachidonoyl taurine is an arachidonoyl amino acid.¹ It is oxygenated by 12(S)- and 15(S)-lipoxygenase and is converted to 12-HETE-taurine (12-HETE-T) in murine resident peritoneal macrophages.² N-Arachidonoyl taurine is an activator of the transient receptor potential vanilloid (TRPV) channels TRPV1 and TRPV4 (EC_{50} s = 28 and 21 μ M, respectively).¹ It increases calcium flux in HIT-T15 pancreatic β -cells and INS-1 rat islet cells when used at a concentration of 10 μ M and increases insulin secretion from 832/13 INS-1 pancreatic β -cells.³ The levels of N-arachidonoyl taurine are changed in mouse brain following administration of Δ^9 -tetrahydrocannabinol (Δ^9 -THC).⁴

References

1. Saghatelian, A., McKinney, M.K., Bandell, M., *et al.* A FAAH-regulated class of N-acyl taurines that activates TRP ion channels. *Biochemistry* **45**(30), 9007-9015 (2006).
2. Turman, M.V., Kingsley, P.J., Rouzer, C.A., *et al.* Oxidative metabolism of a fatty acid amide hydrolase-regulated lipid, arachidonoyltaurine. *Biochemistry* **47**(12), 3917-3925 (2008).
3. Waluk, D.P., Vielfort, K., Derakhshan, S., *et al.* N-Acyl taurines trigger insulin secretion by increasing calcium flux in pancreatic β -cells. *Biochem. Biophys. Res. Commun.* **430**(1), 54-59 (2013).
4. Leishman, E., Murphy, M., Mackie, K., *et al.* Δ^9 -Tetrahydrocannabinol changes the brain lipidome and transcriptome differentially in the adolescent and the adult. *Biochim. Biophys. Acta. Mol. Cell Biol. Lipids* **1863**(5), 479-492 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM