

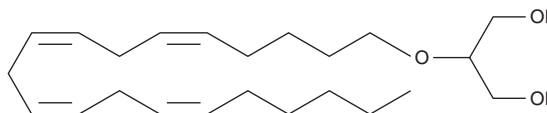
PRODUCT INFORMATION



2-Arachidonyl Glycerol ether

Item No. 62165

CAS Registry No.: 222723-55-9
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraen-2-glyceryl ether
Synonyms: 2-AG ether, Noladin
MF: C₂₃H₄₀O₃
FW: 364.6
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥2 years



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

Laboratory Procedures

2-Arachidonyl glycerol ether (2-AG ether) 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 2-AG ether in these solvents is approximately 15 and 20 mg/ml, respectively.

2-AG ether is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 2-AG ether should be diluted with the aqueous buffer of choice. 2-AG ether has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

Description

2-AG ether selectively binds to cannabinoid (CB) receptor 1 ($K_{1/2} = 21.2$ and $>3,000$ nM for CB₁ and CB₂, respectively, in a radioligand binding assay).¹ It is a potent and selective agonist of CB₁ and GPR55 with EC₅₀ values of 10, 37, and $>30,000$ nM for CB₁, GPR55, and CB₂, respectively.² 2-AG ether displays the typical tetrad of CB activities in mice.¹ It is more chemically stable than 2-AG (Item No. 62160), with an endogenous half-life of hours rather than minutes.³ However, it is at least 10-fold less potent than 2-AG in eliciting typical CB₁-mediated responses.⁴ 2-AG ether elicits modest reductions in intraocular pressure in rabbits when administered at doses exceeding 50 µg per eye.³ It increases aqueous humor outflow via the CB₁ receptor in the trabecular meshwork.⁵ Administration of 2-AG ether to the nucleus accumbens (0.0625-1 µg) increases dietary intake and enhances fat consumption in rats given access to both high-carbohydrate and high-fat diets.⁶

References

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3. Laine, K., Jarvinen, K., Mechoulam, R., et al. *Invest. Ophthalmol. Vis. Sci.* **43(10)**, 3216-3222 (2002).
4. Sugiura, T., Kodaka, T., Nakane, S., et al. *Biol. Chem.* **274**, 2794-2801 (1999).
5. Njie, Y.F., Kumar, A., Qiao, Z., et al. *Invest. Ophthalmol. Vis. Sci.* **47(5)**, 1999-2005 (2006).
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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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