

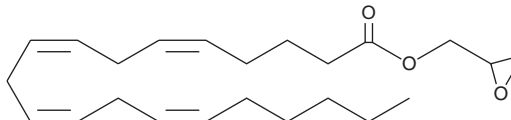
# Product Information



## O-Arachidonoyl Glycidol

Item No. 10010547

**CAS Registry No.:** 439146-24-4  
**Formal Name:** 5Z,8Z,11Z,14Z-eicosatetraenoic acid, oxiranylmethyl ester  
**MF:** C<sub>23</sub>H<sub>36</sub>O<sub>3</sub>  
**FW:** 360.5  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that o-arachidonoyl glycidol be stored as supplied at -20°C. It should be stable for at least one year.

O-Arachidonoyl glycidol is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of O-arachidonoyl glycidol in ethanol is approximately 20 mg/ml and approximately 50 mg/ml in DMSO and DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

2-Arachidonoyl glycerol (2-AG) is an endogenous ligand that binds to both central cannabinoid (CB<sub>1</sub>) and peripheral cannabinoid (CB<sub>2</sub>) receptors and is involved in the regulation of a broad range of neurotransmitter signalling functions with implications in neurodegenerative diseases, pain, cancer, and obesity.<sup>1</sup> Levels of this endocannabinoid are regulated by hydrolysis to glycerol and arachidonic acid by the enzyme monoacylglycerol lipase. O-Arachidonoyl glycidol is a 2-AG analog that blocks 2-oleoyl glycerol hydrolysis in the cytosolic and membrane fractions of rat cerebella with IC<sub>50</sub> values of 4.5 and 19 μM, respectively.<sup>1</sup> O-arachidonoyl glycidol inhibits fatty acid amide hydrolase-catalyzed hydrolysis of arachidonoyl ethanolamide (AEA) in the membrane fraction of rat cerebella with an IC<sub>50</sub> value of 12 μM.<sup>1</sup>

### Reference

1. Cisneros, J.A., Vandevoorde, S., Ortega-Gutiérrez, S., *et al.* Structure-activity relationship of a series of inhibitors of monoacylglycerol hydrolysis-comparison with effects upon fatty acid amide hydrolase. *J. Med. Chem.* **50**, 5012-5023 (2007).

### Related Products

URB597 - Item No. 10046 • URB937 - Item No. 10674 • Arachidonoyl Ethanolamide - Item No. 90050 • N-Arachidonoyl Maleimide - Item No. 10007517

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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