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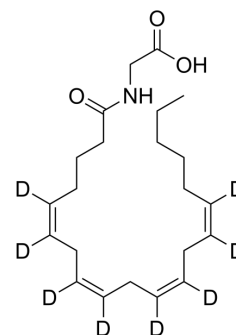
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N-Arachidonylglycine-d₈

Cat. No.:	HY-103332S
CAS No.:	1159908-44-7
Molecular Formula:	C ₂₂ H ₂₇ D ₈ NO ₃
Molecular Weight:	369.57
Target:	Endogenous Metabolite; GlyT; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	N-Arachidonylglycine-d ₈ is a deuterated labeled N-Arachidonylglycine ^[1] . N-Arachidonylglycine (NA-Gly), a carboxylic analog of the endocannabinoid anandamide (AEA), is a GPR18 agonist (EC ₅₀ = 44.5 nM). Unlike AEA, N-Arachidonylglycine has no activity at either CB1 or CB2 receptors. N-Arachidonylglycine inhibits GLYT2 (IC ₅₀ = 5.1 μM). N-Arachidonylglycine also is an effective activator of endometrial cell migration ^{[2][3]} .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . N-Arachidonylglycine (0.1 nM-100 μM; 5 min) drives MAPK activation in GPR18-transfected HEK293 cells ^[2] . N-Arachidonylglycine shows no activity at GLYT1 or GAT1 at concentrations up to 100 μM ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	N-Arachidonylglycine (10 mg/kg; oral) increases blood concentrations of anandamide 9-fold ^[4] . N-Arachidonylglycine (1.2 mg/kg; oral; once) results in a significant 70% reduction of peritoneal cells ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. McHugh D, et al. Δ(9) -Tetrahydrocannabinol and N-arachidonyl glycine are full agonists at GPR18 receptors and induce migration in human endometrial HEC-1B cells. *Br J Pharmacol.* 2012;165(8):2414-2424.
- [2]. Edington AR, et al. Extracellular loops 2 and 4 of GLYT2 are required for N-arachidonylglycine inhibition of glycine transport. *J Biol Chem.* 2009;284(52):36424-36430.
- [3]. Burstein SH. N-Acyl Amino Acids (Elmiric Acids): Endogenous Signaling Molecules with Therapeutic Potential. *Mol Pharmacol.* 2018;93(3):228-238.
- [4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

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

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