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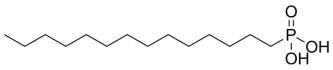
Tetradecylphosphonic acid

Cat. No.:	HY-132238
CAS No.:	4671-75-4
Molecular Formula:	$C_{14}H_{31}O_3P$
Molecular Weight:	278.37
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tetradecylphosphonic acid is a biochemical reagent that can be used as a biological material or organic compound for life science related research.
In Vitro	Tetradecyl phosphonate is a pan-antagonist of lysophosphatidic acid 1 (LPA1), LPA2, and LPA3 receptors. The IC50 value for inhibition of LPA-induced calcium mobilization was 10 μM, 5.5 μM, and 3.1 μM, respectively. At a concentration of 10 μM, tetradecyl phosphonate activates a peroxisome proliferator-activated receptor γ reporter construct 4-fold when compared with the controls and partially inhibits autotaxin with an IC50 value of approximately 3 μM. Lysophosphatidic acid (LPA) , also known as autotaxin (ATX), is a lipid signaling molecule formed by the hydrolysis of lysophosphatidyl choline by lysophospholipase D. LPA signals through four different G protein-coupled receptors, named as LPA1/EDG-2, LPA2/EDG-4, LPA3/EDG-7, and LPA4/GPR23 . It has been reported that LPA was involved in activating peroxisome proliferator-activated receptor γ (PPARγ) . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[3]. Noguchi K, Ishii S, Shimizu T. Identification of p2y9/GPR23 as a novel G protein-coupled receptor for lysophosphatidic acid, structurally distant from the Edg family[J]. Journal of Biological Chemistry, 2003 , 278(28): 25600-2560

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