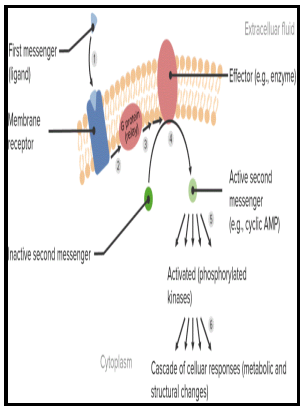
Lipid second messengers

Plenum Press - Production and function of lipid second messengers in proliferating and differentiated neuroblastoma cells



Description: Scientists in lipid biochemistry research have increasingly recognized the role of lipids as signaling molecules, aside from their importance in forming cellular membranes and storing energy. This book provides the latest findings on a wide variety of complex lipids in cells that function either as intracellular or intercellular messengers. International investigators present current data on the most extensively studied examples of both intracellular and intercellular messengers generated from lipids, and describe their basic mechanisms, which also utilize receptors in the G-protein-coupled family. The in-depth discussions address such topics as lipid signaling for protein kinase C activation, phosphatidic acid and lyso-phosphatidic acid, ceramide as a messenger, bioactive properties of Sphingosine and structurally related compounds, platelet-activating factor and PAF-like mimetics, and prostaglandins and related compounds. Lipid Second Messengers is an up-to-date reference on developments in the expanding field of lipid-derived signals and will be of interest to biochemists, physiologists, pharmacologists, geneticists, and biologists.

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Fibers -- Congresses
Textile fibers -- Congresses
Second messengers (Biochemistry)
Cellular signal transduction.
Cell receptors.
Lipids -- Analysis.
G-Proteins.
Signal Transduction.
Cell Communication.
Second Messenger Systems.
Lipids.Lipid second messengers

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Shirley Institute publication -- S.28
Shirley Institute publication ; S28
Handbook of lipid research -- v. 8.Lipid second messengers
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Second Messengers

Post-translational Modifications in Plants, vol 53, pp 109—121. A wide variety of intracellular regulators of PLD activity have been reported ,.

Phospholipases

The last possibility was corroborated by observations of the effect of Sph on DAG generation, where a similar decrease was observed in the presence of S1P and Sph.

Phospholipid signalling and lipid

Second messengers vary significantly in size and chemical character: from ions to hydrophilic molecules such as cyclic nucleotides to hydrophobic molecules such as diacylglycerol. Disorders of surfactant metabolism present as respiratory deficiencies. Sildenafil citrate Viagra and its relatives act by inhibiting cGMP-specific PDE5 in the arterial wall smooth muscle of the penis, which elevates cGMP and increases blood flow.

Phospholipases

Phospholipase A Phospholipase A 1 Phospholipase A 1 enzymes hydrolyze the fatty acid at the sn-1 position of phospholipids. PROTEINS, LIPIDS, AND PHOTOTRANSDUCTION Signal transduction in outer segments of vertebrate photoreceptors is mediated by a series of reactions among multiple polypeptides forming protein-protein complexes within or on the surface of the disc and plasma membranes. The activation of multiple target enzymes by a single second messenger molecule further amplifies the signal.

Phospholipases

This hypothesis is based on the experiments carried out in the models proposed in Fig. This could indicate that PA and DAG levels are of physiological relevance in ROS under illumination; i.

Phospholipid signalling and lipid

This pathway for calcium influx has been known for more than two decades, and the store-operated current I crac, for calcium-release-activated current has been well characterized. Questions remain about the intracellular localization of PI3K lipid second messengers and their effectors. The activation of PLD activity reported in DROS was also coincident with increased RhoA levels derived from immunoblotting studies.

Phospholipases

DAGL DAG formed by LPP activity is partially hydrolyzed by DAGL, yielding MAG. Activation of exocytosis by cross-linking of the IgE receptor is dependent on ADP-ribosylation factor 1-regulated phospholipase D in RBL-2H3 mast cells: evidence that the mechanism of activation is via regulation of phosphatidylinositol 4,5-bisphosphate synthesis. These DHA chains provide either maximal fluidity or maximal free volume of acyl chain packing in disc membranes, which is responsible for optimal visual function , —.

Second Messengers

TRPM6 is restricted to kidney tubules and the intestinal epithelium, and plays an important role in magnesium re adsorption defective TRPM6 function leads to hypomagnesemia , whereas TRPM7 is ubiquitously expressed in mammals. The activation mechanisms for phospholipase C-δ, -η, and -ζ are not known.

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