Data Sheet (Cat.No.TN3910)

TargetMol
A DRUG SCREENING EXPERT

Ecdysone

Chemical Properties

CAS No.:	3604-87-3
Formula:	C27H44O6
Molecular Weight:	464.63
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Ecdysone signaling through Ecdysone receptor isoform B1 is required cell autonomously for the muscle death. A nctional Bombyx Ecdysone receptor binds to EcRE-D and activates the expression of BmBR-C. Mnoaminergic autocrine signaling in the PG regulates Ecdysone biogenesis in a coordinated fashion on activation by PTTH and Ilps.
Targets(IC_{50})	ATPase: None Autophagy: None Potassium Channel: None Sodium Channel: None
In vitro	Malpighian tubules are the osmoregulatory and detoxifying organs of Drosophila and its proper development is critical for the survival of the organism. They are made up of two major cell types, the ectodermal principal cells and mesodermal stellate cells. The principal and stellate cells are structurally and physiologically distinct from each other, but coordinate together for production of isotonic fluid. Proper integration of these cells during the course of development is an important pre-requisite for the proper functioning of the tubules. METHODS AND RESULTS: We have conclusively determined an essential role of Ecdysone hormone in the development and function of Malpighian tubules. Disruption of Ecdysone signaling interferes with the organization of principal and stellate cells resulting in malformed tubules and early larval lethality. Abnormalities include reduction in the number of cells and the clustering of cells rather than their arrangement in characteristic wild type pattern. Organization of F-actin and β-tubulin also show aberrant distribution pattern. Malformed tubules show reduced uric acid deposition and altered expression of Na(+)/K(+)-ATPase pump. CONCLUSIONS: B2 isoform of Ecdysone receptor is critical for the development of Malpighian tubules and is expressed from early stages of its development.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.152 mL	10.761 mL	21.523 mL
5 mM	0.430 mL	2.152 mL	4.305 mL
10 mM	0.215 mL	1.076 mL	2.152 mL
50 mM	0.043 mL	0.215 mL	0.430 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Ecdysone regulates morphogenesis and function of Malpighian tubules in Drosophila melanogaster through EcR-B2 isoform. Dev Biol. 2015 Feb 15;398(2):163-76.

2. Ecdysone response elements in the distal promoter of the Bombyx Broad-Complex gene, BmBR-C. Insect Mol Biol. 2014 Jun;23(3):341-56.

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