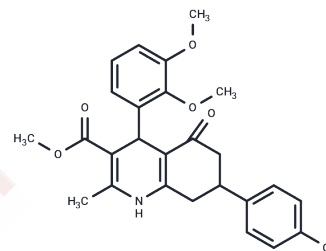


Endosidin 7

Chemical Properties

CAS No. :	329072-88-0
Formula:	C ₂₆ H ₂₆ ClNO ₅
Molecular Weight:	467.94
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Endosidin 7, a specific inhibitor of callose synthase, organizes callose deposition during plant cytoplasmic division without affecting endosomal transport during interphase or cytoskeletal organization, preventing late cytokinesis.
Targets(IC50)	Others
In vitro	Endosidin 7 (ES7) inhibits Arabidopsis callose synthase activity in a concentration-dependent manner using CHAPS-extracted membrane fractions. At 100µM, ES7 reduces enzyme activity by approximately 50%. Enzyme kinetics indicate that ES7 acts as a mixed-type inhibitor, increasing the apparent Km and decreasing the Vmax, suggesting interaction with both the free enzyme and the enzyme-substrate complex at different affinities[1].
In vivo	Endosidin 7 effectively arrests late cytokinesis in Arabidopsis seedlings. Root growth assays determined an IC ₅₀ of 4.8µM. A 2-hour treatment with 25-50µM Endosidin 7 induces cell plate fragmentation, binucleate cells, and complete inhibition of callose deposition at the cell plate. Endosidin 7 specifically targets late cytokinesis without affecting interphase endomembrane markers or cellulose biosynthesis[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.137 mL	10.6851 mL	21.3703 mL
5 mM	0.4274 mL	2.137 mL	4.2741 mL
10 mM	0.2137 mL	1.0685 mL	2.137 mL
50 mM	0.0427 mL	0.2137 mL	0.4274 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Park E, Díaz-Moreno SM, Davis DJ, Wilkop TE, Bulone V, Drakakaki G. Endosidin 7 Specifically Arrests Late Cytokinesis and Inhibits Callose Biosynthesis, Revealing Distinct Trafficking Events during Cell Plate Maturation. *Plant Physiol.* 2014 Jul;165(3):1019-1034. doi: 10.1104/pp.114.241497. Epub 2014 May 23. Erratum in: *Plant Physiol.* 2015 May;168(1):378.

Davis DJ, McDowell SC, Park E, Hicks G, Wilkop TE, Drakakaki G. The RAB GTPase RABA1e localizes to the cell plate and shows distinct subcellular behavior from RABA2a under Endosidin 7 treatment. *Plant Signal Behav.* 2016;11(3):e984520.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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