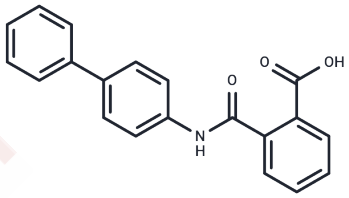
Data Sheet (Cat.No.T1748)

TargetMol

Kartogenin

Chemical Properties



CAS No. : 4727-31-5

Formula: C20H15NO3

Molecular Weight: 317.34

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Kartogenin (KGN) is an activator of the smad4/smad5 pathway, and promotes the selective differentiation of multipotent mesenchymal stem cells into chondrocytes.
Targets(IC50)	TGF-beta/Smad
In vitro	Kartogenin promotes type I collagen synthesis in dermal fibroblasts by activating the Smad4/Smad5 pathway, without exhibiting significant cytotoxicity on the activity, morphology, and survival of fibroblasts. Additionally, by enhancing the nuclear localization of CBFβ, Kartogenin induces differentiation of hMSCs into chondrocytes and protects articular chondrocytes.
In vivo	Kartogenin at a concentration of 100 nM stimulates collagen synthesis in the dermis of mice. Additionally, it promotes the growth of skeletal limbs and the development of synovial joints in mice. Concentrations of 10 μM and 100 μM Kartogenin respectively enhance cartilage repair in mouse models of osteoarthritis (OA) induced by collagenase VII and surgically.
Cell Research	For the cell viability assay, fibroblasts are seeded on six-well plates, followed by Kartogenin or DMSO treatment. According to the manufacturer's instructions, cell viability and viability are assessed by AlamarBlue assay.(Only for Reference)

Solubility Information

Solubility	H2O: <1 mg/mL, DMSO: 63 mg/mL (198.53 mM),Sonication is recommended. Ethanol: 18 mg/mL (56.72 mM),Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1512 mL	15.756 mL	31.5119 mL
5 mM	0.6302 mL	3.1512 mL	6.3024 mL
10 mM	0.3151 mL	1.5756 mL	3.1512 mL
50 mM	0.063 mL	0.3151 mL	0.6302 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.

Reference

Johnson K, et al. Science. 2012, 336(6082), 717-721.
Wang J, et al. Biochem Biophys Res Commun. 2014, 450(1), 568-574.
Decker RS, et al. Dev Biol. 2014, 395(2), 255-267.