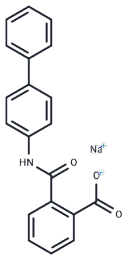
Data Sheet (Cat.No.T86778)

TargetMol

Kartogenin sodium

Chemical Properties



CAS No. : 1401168-39-5

Formula: C20H14NNaO3

Molecular Weight: 339.32

Appearance:

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

Biological Description

Description	Kartogenin (KGN) sodium acts as an inducer of chondrogenic tissue formation (EC 50: 100 nM). It promotes chondrogenesis by binding to fibrin A, disrupting its interaction with the transcription factor core binding factor beta subunit (CBFβ), and modulating the CBFβ-RUNX1 transcriptional program. Additionally, Kartogenin sodium aids tendon-bone junction (TBJ) wound healing by stimulating collagen synthesis. It is extensively utilized in cell-free therapies for cartilage regeneration and protection, tendon-bone healing, wound healing, and limb development. The compound is also vital for cartilage repair, coordinating limb development, and osteoarthritis (OA) research [1] [2] [3] [4].
In vitro	Kartogenin sodium (100 nM; 72 h) induces the formation of chondrocyte aggregates in primary hMSCs [1]. At concentrations ranging from 10 nM to 10 μM over 72 hours, it increases the expression of chondrocyte-specific genes in hMSCs [1]. Kartogenin sodium (0.12-10 μM; 48 h) inhibits cytokine-induced nitric oxide (NO) and glycosaminoglycan (GAG) release in primary bovine articular chondrocytes [1]. Additionally, concentrations of 50 to 5000 nM over a period of 2 weeks induce chondrogenic differentiation in BMSCs in a dose-dependent manner [2].
In vivo	Kartogenin sodium (10 μM, dissolved in 4 μL saline; administered on day 7 and day 21) enhances cartilage repair in a collagenase VII-induced mouse model of osteoarthritis [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9471 mL	14.7354 mL	29.4707 mL
5 mM	0.5894 mL	2.9471 mL	5.8941 mL
10 mM	0.2947 mL	1.4735 mL	2.9471 mL
50 mM	0.0589 mL	0.2947 mL	0.5894 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.

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