

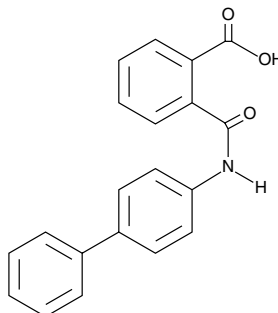
Product Information



Kartogenin

Item No. 11826

CAS Registry No.: 4727-31-5
Formal Name: 2-[[[1,1'-biphenyl]-4-ylamino]carbonyl]-benzoic acid
MF: C₂₀H₁₅NO₃
FW: 317.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 281 nm



Laboratory Procedures

For long term storage, we suggest that kartogenin be stored as supplied at -20°C. It should be stable for at least two years. Kartogenin is supplied as a crystalline solid. A stock solution may be made by dissolving the kartogenin in the solvent of choice. Kartogenin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of kartogenin in these solvents is approximately 30 mg/ml.

Kartogenin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, kartogenin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Kartogenin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Kartogenin potently induces differentiation of human mesenchymal stem cells into chondrocytes with an EC₅₀ value of 100 nM.¹ Kartogenin induces chondrogenesis by binding the actin-binding protein, filamin A, which disrupts its interaction with the transcription factor core-binding factor β subunit (CBFβ). When dissociated from filamin A, CBFβ translocates to the nucleus and forms a transcriptional complex with the runt-related transcription factor RUNX1, which enables chondrocyte differentiation. Kartogenin has been shown to promote cartilage repair in a mouse model of osteoarthritis and to protect against cytokine-induced damage in osteoarthritic bovine articular chondrocytes *in vitro*.¹

Reference

1. Johnson, K., Zhu, S., Tremblay, M.S., *et al.* A stem cell-based approach to cartilage repair. *Science* **336**, 717-721 (2012).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11826

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