

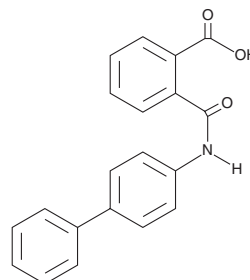
PRODUCT INFORMATION



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%
UV/Vis.: λ_{max}: 281 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Kartogenin is supplied as a crystalline solid. A stock solution may be made by dissolving the kartogenin in the solvent of choice, which should be purged with an inert gas. Kartogenin is soluble in organic solvents such as DMSO and dimethyl formamide. 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.

Description

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(6082)**, 717-721 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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