# Product Specification Sheet

**Product Name:** Kartogenin (KGN)

**Catalog Number:**
- C5278-2 (powder)
- C5278-2s (10 mM in DMSO)

**Package Size:** 2 mg

## Technical Information:

- **Chemical Formula:** \( \text{C}_{26}\text{H}_{15}\text{NO}_3 \)
- **CAS #:**
- **Molecular Weight:** 317.34
- **Purity:** >99%
- **Formulation:** Off-white solid
- **Solubility:** Soluble in DMSO up to 50 mM
- **Chemical Name:** 2-{[1,1'-biphenyl]-4-ylcarbamoyl}benzoic acid
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

## Handling:
- For C5278-2 (powder), add 630 µL of DMSO to make 10 mM solution.
- For C5278-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

## Biological Activity:

Kartogenin was shown to promote robust chondrocyte differentiation from primary human mesenchymal stem cells/MSCs [EC50 = 100 nM]. Kartogenin-induced chondrocytes from hMSCs express typical set of chondrogenic genes, form chondrocyte nodules, and exhibit characteristic chondrocyte functions. In an in vitro model mimicking cytokine-induced damage during osteoarthritis (OA), 1-5 µM of Kartogenin treatment inhibited nitric oxide (NO) and glycosaminoglycans (GAG) release. Direct Intra-articular (IA) administration of Kartogenin promoted cartilage repair in collagenase and surgery induced OA models in mice, and alleviated OA-induced joint pain. Mechanism of action studies showed that Kartogenin interacts with filamin A (FLNA) and results in the release of transcription factor CBFβ to the nucleus to regulate chondrogenic gene expression.

## Reference:

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**For research only, not for clinical or diagnostic use.**