



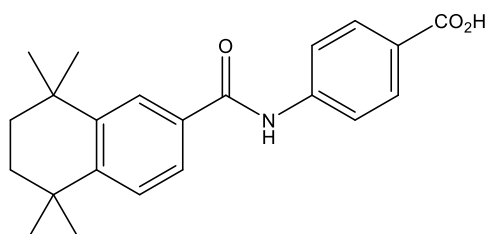
Catalog # 10-5511

AM-580

CAS# 102121-60-8

4-[(5,6,7,8-Tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)carboxamido]benzoic acid; CD336; NSC 608001; Ro 40-6055

Lot # X109569



AM-580 (102121-60-8) is a retinoic acid analog acting as a RAR α agonist ($K_d = 8$ nM).¹ Induces or blocks differentiation depending on cell type and environment.^{2,3} In combination with CHIR-99021 it induces differentiation of human induced pluripotent stem cells (iPSCs) into intermediate mesoderm (80% induction rate in 5 days) capable of forming kidney structures.⁴ AM-580 exhibits anti-angiogenic activity *in vivo*, and induces differentiation of acute promyelocytic leukemia cells.^{5,6}

- 1) Bernard *et al.* (1992), *Identification of synthetic retinoids with selectivity for human nuclear retinoic acid receptor gamma*; Biochem. Biophys. Res. Commun. **186** 977
- 2) Safonova *et al.* (1994), *Fatty acids and retinoids act synergistically on adipose cell differentiation*; Biochem. Biophys. Res. Commun. **204** 498
- 3) Shibuyua *et al.* (2005), *Retinoic acid is a potential negative regulator for differentiation of human periodontal ligament cells*; J. Periodontal Res. **40** 432
- 4) Araoka *et al.* (2014), *Efficient and rapid induction of human iPSCs/ESCs into nephrogenic intermediate mesoderm using small molecule-based differentiation methods*; PLoS One. **9** e84881
- 5) Oikawa *et al.* (1993), *Three novel synthetic retinoids, Re 80, Am 580 and Am 80, all exhibit anti-angiogenic activity in vivo*; Eur. J. Pharmacol. **249** 113
- 6) Gianni *et al.* (1996), *AM580, a stable benzoic acid derivative of retinoic acid has powerful and selective cyto-differentiating effects on acute promyelocytic leukemia cells*; Blood **87** 1520

PHYSICAL DATA

Molecular Weight:	351.45
Molecular Formula:	C ₂₂ H ₂₅ NO ₃
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (35 mg/mL) or ethanol (18 mg/mL)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20° for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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