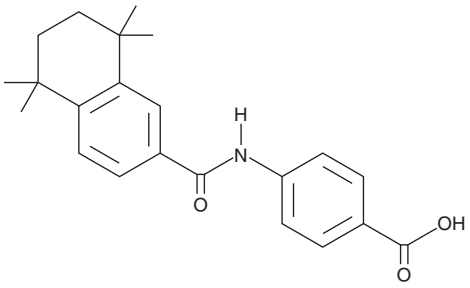
PRODUCT INFORMATION

AM580

Item No. 15261

CAS Registry No.: 102121-60-8
Formal Name: 4-[[(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl) carbonyl]amino]-benzoic acid
Synonyms: CD336, NSC 608001, Ro 40-6055
MF: $C_{22}H_{25}NO_3$
FW: 351.4
Purity: ≥98%
UV/Vis.: λ_{max}: 287 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

AM580 is supplied as a crystalline solid. A stock solution may be made by dissolving the AM580 in the solvent of choice, which should be purged with an inert gas. AM580 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AM580 in these solvents is approximately 10, 20, and 25 mg/ml, respectively.

AM580 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AM580 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. AM580 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

AM580 is a retinoic acid receptor agonist that is selective for RARα (K_d = 8 nM; AC_{50} = 0.36 nM) compared to RARβ (K_d = 131 nM; AC_{50} = 24.6 nM) and RARγ (K_d = 450 nM; AC_{50} = 27.9 nM).[1] It demonstrates greater specific binding to RARα compared to retinoic acid (Item No. 11017), which exhibits little selectivity across RARα, β, or γ.[1-3] AM580 has been used in combination with the GSK3β inhibitor CHIR99021 (Item No. 13122) to efficiently induce differentiation of human induced pluripotent stem cells into immediate mesoderm.[4] It can also inhibit the proliferation of various tumor cells, inhibiting survival signaling pathways and inducing apoptosis.[5,6]

References

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2. Kim, M.-J., Ciletti, N., Michel, S., *et al. J. Invest. Dermatol.* **114(2)**, 349-353 (2000).
3. Rochette-Egly, C. and Germain, P. *Nucl. Recept. Signal.* **7**, e005 (2009).
4. Araoka, T., Mae, S., Kurose, Y., *et al. PLoS One* **9(1)**, e84881 (2014).
5. Lu, Y., Bertran, S., Samuels, T.A., *et al. Oncogene* **29(25)**, 3665-3676 (2010).
6. Cheng, Y.H., Utsunomiya, H., Pavone, M.E., *et al. J. Mol. Endocrinol.* **46(2)**, 139-153 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM