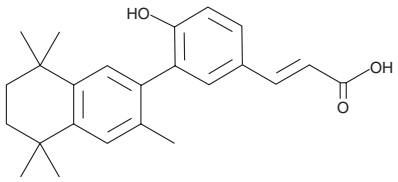
PRODUCT INFORMATION

CD3254

Item No. 20870

CAS Registry No.:	196961-43-0
Formal Name:	3-[4-hydroxy-3-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)phenyl]-2-propenoic acid
MF:	$C_{24}H_{28}O_3$
FW:	364.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 210, 316 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

CD3254 is supplied as a crystalline solid. A stock solution may be made by dissolving the CD3254 in the solvent of choice, which should be purged with an inert gas. CD3254 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CD3254 in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

CD3254 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CD3254 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CD3254 has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CD3254 is a selective agonist of the retinoid X receptors (RXRs; EC_{50} = ~10 nM for human RXRβ) that is without effect on retinoic acid receptors (RARs).[1,2] It stimulates the recruitment of the nuclear receptor interaction domain of the TRAP220 coactivator to RXRα/RARβ heterodimers *in vitro*.[3] CD3254 also enhances the recruitment of the PPARγ coactivator 1α, PGC-1α, to RXRα/PPARγ heterodimers.[4]

References

1. Nahoum, V., Pérez, E., Germain, P., *et al.* Modulators of the structural dynamics of the retinoid X receptor to reveal receptor function. *Proc. Natl. Acad. Sci. USA* **104(44)**, 17323-17328 (2007).
2. Jurutka, P. W., Kaneko, I., Yang, J., *et al.* Modeling, synthesis, and biological evaluation of potential retinoid X receptor (RXR) selective agonists: Novel analogues of 4-[1-(3,5,5,8,8-pentamethyl-5,6,7,8-tetrahydro-2-naphthyl)ethynyl]benzoic acid (bexarotene) and (E)-3-(3-(1,2,3,4-tetrahydro-1,1,4,4,6-pentamethylnaphthalen-7-yl)-4-hydroxyphenyl)acrylic acid (CD3254). *J. Med. Chem.* **56(21)**, 8432-8454 (2013).
3. Pogenberg, V., Guichou, J.-F., Vivat-Hannah, V., *et al.* Characterization of the interaction between retinoic acid receptor/retinoid X receptor (RAR/RXR) heterodimers and transcriptional coactivators through structural and fluorescence anisotropy studies. *J. Biol. Chem.* **280(2)**, 1625-1633 (2005).
4. le Maire, A., Grimaldi, M., Roecklin, D., *et al.* Activation of RXR-PPAR heterodimers by organotin environmental endocrine disruptors. *EMBO Reports* **10(4)**, 367-373 (2009).

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