

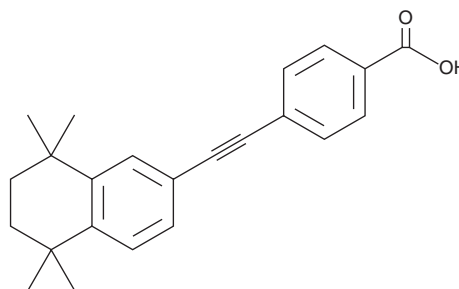
PRODUCT INFORMATION



EC 23

Item No. 9002073

CAS Registry No.: 104561-41-3
Formal Name: 4-[2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)ethynyl]-benzoic acid
Synonyms: AGN 190205, BASF 46928
MF: C₂₃H₂₄O₂
FW: 332.4
Purity: ≥98%
UV/Vis.: λ_{max}: 302 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

EC 23 is supplied as a crystalline solid. A stock solution may be made by dissolving the EC 23 in the solvent of choice, which should be purged with an inert gas. EC 23 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of EC 23 in ethanol is approximately 1 mg/ml and approximately 5 mg/ml in DMSO and DMF.

EC 23 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, EC 23 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. EC 23 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

All-trans retinoic acid (ATRA, Item No. 11017) is frequently used in cell culture to induce stem cell differentiation or enhance the growth, differentiation, and maintenance of neural cell types.¹⁻³ Unfortunately, ATRA is readily susceptible to isomerisation and degradation upon exposure to light or other factors such as temperature and oxidation, which presents confounding issues for cell culture. EC 23 is a photostable synthetic analog of ATRA that induces differentiation in human pluripotent embryonic stem cells when used within the range of 100 nM-10 μM.¹⁻³

References

1. Christie, V.B., Maltman, D.J., Henderson, A.P., *et al.* Retinoid supplementation of differentiating human neural progenitors and embryonic stem cells leads to enhanced neurogenesis *in vitro*. *J. Neurosci. Methods* **193**(2), 239-245 (2010).
2. Clemens, G., Flower, K.R., Henderson, A.P., *et al.* The action of all-trans-retinoic acid (ATRA) and synthetic retinoid analogues (EC19 and EC23) on human pluripotent stem cells differentiation investigated using single cell infrared microspectroscopy. *Mol. BioSyst.* **9**(4), 677-692 (2013).
3. Maltmann, D.J., Christie, V.B., Collings, J.C., *et al.* Proteomic profiling of the stem cell response to retinoic acid and synthetic retinoid analogues: Identification of major retinoid-inducible proteins. *Mol. BioSyst.* **5**(5), 458-471 (2009).

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.

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