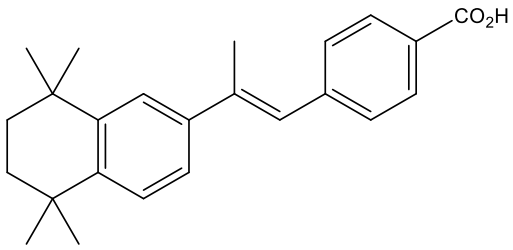
Catalog # 10-2517

TTNPB

CAS# 71441-28-6

4-[(*E*)-2-(5,6,7,8-Tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1-propenyl]benzoic acid; Ro 13-7410; AGN-191183

Lot # X103628



TTNPB is a highly potent and selective retinoic acid analog acting as an RAR agonist (EC_{50} = 21, 4 and 2.4 nM for RARα, RARβ and RARγ respectively).[1] TTNPB has been extensively used in stem cell differentiation protocols. It enhances reprogramming efficiency in chemically induced pluripotent stem cells.[2] Chondrocytes are robustly induced from human pluripotent stem cells by treatment with CHIR99021 and TTNPB.[3] TTNPB alone, efficiently converts primary adult mouse fibroblasts into dermal papilla cell-like cells.[4] Can be used in combination with other small molecules for induction of mouse totipotent stem cells.[5]

1) Beard *et al*. (1995), *Synthesis and structure-activity relationships of stilbene retinoid analogs substituted with heteroaromatic carboxylic acids*; J. Med. Chem., **38** 2820
2) Hou *et al*. (2013), *Pluripotent stem cells induced from mouse somatic cells by small-molecule compounds*; Science, **341** 651
3) Kawata *et al*. (2019), *Simple and Robust Differentiation of Human Pluripotent Stem Cells toward Chondrocytes by Two Small-Molecule Compounds*; Stem Cell Reports, **13** 530
4) Ma *et al*. (2022), *Direct Reprograming of Mouse Fibroblasts into Dermal Papilla Cells via Small Molecules*; Int. J. Mol. Sci., **23** 4213
5) Hu *et al*. (2022), *Induction of mouse totipotent stem cells by a defined chemical cocktail*; Nature, Online ahead of print

PHYSICAL DATA

Molecular Weight:	348.49
Molecular Formula:	$C_{24}H_{28}O_2$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (4 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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