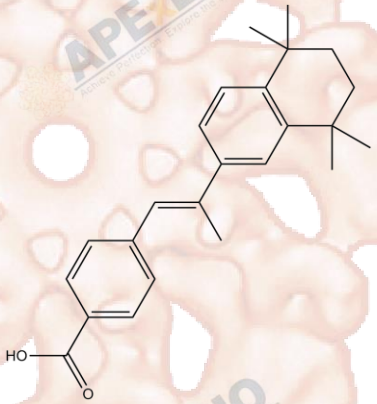
Product Data Sheet

TTNPB (Arotinoid Acid)

Cat. No.: B2058
CAS No.: 71441-28-6
Formula: C24H28O2
M.Wt: 348.48
Synonyms:
Target: Others
Pathway: RARs
Storage: Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾17.4 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.8696 mL	14.3480 mL	28.6961 mL
5 mM	0.5739 mL	2.8696 mL	5.7392 mL
10 mM	0.2870 mL	1.4348 mL	2.8696 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Potent RAR agonist
IC_{50} & Target	4.5 nM (RARβ), 5.1 nM (RARα), 9.3 nM (RARγ)

In Vitro

Cell Viability Assay

Cell Line:	Human mammary epithelial cell line 184 and T47D breast cancer cells
Preparation method:	The solubility of this compound in DMSO is > 17.4 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.
Reacting conditions:	1 μM

	Applications:	In the normal human mammary epithelial cell line 184, TTNPB inhibited cell growth. In T47D cells, TTNPB arrested the cell cycle in the G0/G1 phase and induced apoptosis. Further study showed that TTNPB induced cell cycle blockade mainly by suppressing Cyclin D1 and Cyclin D3 protein activity. But TTNPB did not change the expression of Cyclin D1 protein in a biologically relevant manner.
In Vivo	**Animal experiment**	
	Animal models:	Mice bearing hormone-sensitive (HS) and hormone-insensitive (HI) strains of the MXT murine mammary carcinoma
	Dosage form:	0.25 mg/kg; i.p.
	Applications:	In both MXT-HS and MXT-HI models, TTNPB exhibited equal inhibition on tumor growth. Comparing with Tamoxifen, TTNPB was markedly more efficient in inhibiting cell proliferation and triggering apoptosis. TTNPB inhibited MXT-HS growth rate by inducing apoptosis rather than inhibiting cell proliferation.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Bassem M. Shoucri, Eric S. Martinez, et al. "Retinoid X receptor activation alters the chromatin landscape to commit mesenchymal stem cells to the adipose lineage." Endocrinology. 2017 Jul.

See more customer validations on www.apexbt.com.

References

[1]. Wu K, DuPré E, Kim H, Tin-U CK, Bissonnette RP, Lamph WW, Brown PH. Receptor-selective retinoids inhibit the growth of normal and malignant breast cells by inducing G1 cell cycle blockade. Breast Cancer Res Treat. 2006 Mar;96(2):147-57.

[2]. Darro F, Cahen P, Vianna A, Decaestecker C, Nogaret JM, Leblond B, Chaboteaux C, Ramos C, Pétein M, Budel V, Schoofs A, Pourrias B, Kiss R. Growth inhibition of human in vitro and mouse in vitro and in vivo mammary tumor models by retinoids in comparison with tamoxifen and the RU-486 anti-progestagen. Breast Cancer Res Treat. 1998 Sep;51(1):39-55.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for

long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com