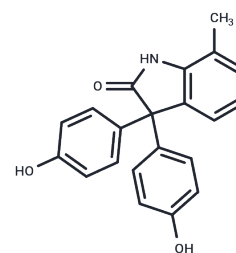


BHPI

Chemical Properties

CAS No. :	56632-39-4
Formula:	C ₂₁ H ₁₇ NO ₃
Molecular Weight:	331.36
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	BHPI is a potent inhibitor of nuclear estrogen receptor ER α -regulated gene expression that induces sustained ER α -dependent activation of the endoplasmic reticulum stress sensor and unfolded protein response, leading to persistent inhibition of protein synthesis, and in ER α -positive cancer cells it hyperactivates plasma membrane PLC γ to generate IP ₃ , deplete ER calcium stores via IP ₃ R channels, and convert the normally protective UPR into a toxic response, making BHPI a valuable probe for estrogen signaling and ER stress-based cancer research.
Targets(IC ₅₀)	Estrogen/progestogen Receptor
In vitro	In cellular assays, BHPI inhibited the proliferation of ER α -positive breast, endometrial, and ovarian cancer cells at concentrations between 100 and 1000 nM. It maintained activity (25 nM) in antiestrogen-resistant cell lines harboring ER α mutations (Y537S, D538G) by triggering UPR hyperactivation, protein synthesis inhibition, and apoptosis [1].
In vivo	In MCF-7 breast cancer xenograft models, intraperitoneal (i.p.) administration of BHPI (10-15 mg/kg) resulted in tumor regression. When administered daily for 10 days or every other day, tumor regression was observed in 48 out of 52 treated tumors. This effect is attributed to the sustained activation of UPR stress within the tumor tissue [1].

Solubility Information

Solubility	DMSO: 100 mg/mL (301.79 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 4 mg/mL (12.07 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0179 mL	15.0893 mL	30.1787 mL
5 mM	0.6036 mL	3.0179 mL	6.0357 mL
10 mM	0.3018 mL	1.5089 mL	3.0179 mL
50 mM	0.0604 mL	0.3018 mL	0.6036 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Andruska ND, et al. Estrogen receptor α inhibitor activates the unfolded protein response, blocks protein synthesis, and induces tumor regression. Proc Natl Acad Sci U S A. 2015 Apr 14;112(15):4737-42.

Mao C, et al. Antiestrogen Resistant Cell Lines Expressing Estrogen Receptor α Mutations Upregulate the Unfolded Protein Response and are Killed by BHPI. Sci Rep. 2016 Oct 7;6:34753.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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