(Z)-4-Hydroxytamoxifen

Catalog No.C13815 Batch:C1381503

Product Datasheet

Technical Data

Formula	$C_{26}H_{29}NO_2$		
Molecular Weight	387.51	**CAS No.**	68047-06-3
Solubility (25°C)*	In vitro	DMSO	78 mg/mL (201.28 mM)
		Ethanol	39 mg/mL (100.64 mM)
		Water	Insoluble

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Biological Activity

Description	(Z)-4-Hydroxytamoxifen ((Z)-4-OHT, trans-4-Hydroxytamoxifen, 4-Monohydroxytamoxifen) is a selective modulator of **estrogen receptor** (SERM) with IC50 of 3.3 nM for the [^{3}H]oestradiol binding to oestrogen receptor.
Targets	[3H]oestradiol binding Oestrogen Receptor [1] (Cell-free assay) 3.3 nM
In vitro	This compound is a partial estrogen that binds to estrogen receptors with relative binding affinity (RBA) of 2.9 and blocks the growth of the MCF-7 human mammary tumor cell line in vitro. [2]
In vivo	(Z)-4-Hydroxytamoxifen is a partial estrogen with antiestrogenic properties, and the cis isomer is less potent than the trans isomer.[3] This compound inhibits estradiol benzoate action and reduces the uterine growth rate in vivo.[2]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  MCF-7 cells
- **Concentrations**
  0.1 nM - 10 μM
- **Incubation Time**
  50 min
- **Method**
  MCF-7 cells are incubated at 37℃ for 50 min with 1 nM [^{3}H]estradiol in the absence or presence of increasing amounts (0.1 nM - 10 μM) of (Z)-4-Hydroxytamoxifen or unlabeled estradiol (control). Bound compounds are then extracted with ethanol, and the amounts of estrogen receptor bound [^{3}H]estradiol are measured.

Animal Study:[3]

- **Animal Models**
  immature female rats
- **Dosages**
  1.25 μg
- **Administration**
  SC

References

https://pubmed.ncbi.nlm.nih.gov/591813/ https://pubmed.ncbi.nlm.nih.gov/3385723/ https://pubmed.ncbi.nlm.nih.gov/6781873/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

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