Small Molecules

(Z)-4-Hydroxytamoxifen

Estrogen signaling pathway modulator; Modulates selective estrogen receptor and estrogen-related receptor

Catalog #	74052	5 mg
	74054	10 mg
	74056	25 mg

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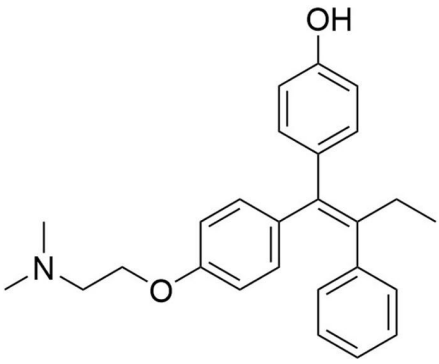
Product Description

(Z)-4-Hydroxytamoxifen is a cell-permeable selective estrogen receptor modulator (SERM) that binds to estrogen receptors (ER) and estrogen-related receptors (ERR) with both estrogenic and anti-estrogenic effects (Poulin et al.).

Molecular Name: (Z)-4-Hydroxytamoxifen
Alternative Names: trans-4-Hydroxytamoxifen; 4-OH-TAM; ICI 79280
CAS Number: 68047-06-3
Chemical Formula: $C_{26}H_{29}NO_2$
Molecular Weight: 387.5 g/mol
Purity: ≥ 98%
Chemical Name: 4-[(1Z)-1-{4-[2-(dimethylamino)ethoxy]phenyl}-2-phenylbut-1-en-1-yl]phenol
Structure:



Properties

Physical Appearance: A crystalline solid

Storage: Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant.
Stable as supplied for 12 months from date of receipt.

Solubility:
· DMSO ≤ 5.1 mM
· Absolute ethanol ≤ 50 mM
· DMF ≤ 50 mM
For example, to prepare a 10 mM stock solution in absolute ethanol, resuspend 1 mg in 258 µL of absolute ethanol.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in absolute ethanol at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final ethanol concentration above 0.1% due to potential cell toxicity.

Published Applications

CANCER RESEARCH
· Suppresses tumor growth in breast cancer cells (Freiss et al.; Osborne et al.).

References

Freiss G et al. (1990) Mechanisms of 4-hydroxytamoxifen anti-growth factor activity in breast cancer cells: alterations of growth factor receptor binding sites and tyrosine kinase activity. Biochem Biophys Res Commun 173(3): 919–26.
Osborne CK et al. (1991) Acquired tamoxifen resistance: correlation with reduced breast tumor levels of tamoxifen and isomerization of trans-4-hydroxytamoxifen. J Natl Cancer Inst 83(20): 1477–82.
Poulin R et al. (1989) Antiestrogenic properties of keoxifene, trans-4-hydroxytamoxifen, and ICI 164384, a new steroidal antiestrogen, in ZR-75-1 human breast cancer cells. Breast Cancer Res Treat 14(1): 65–76.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).