Small Molecules

Raloxifene

Selective estrogen receptor modulator

Catalog # 72852 100 mg
72854 500 mg

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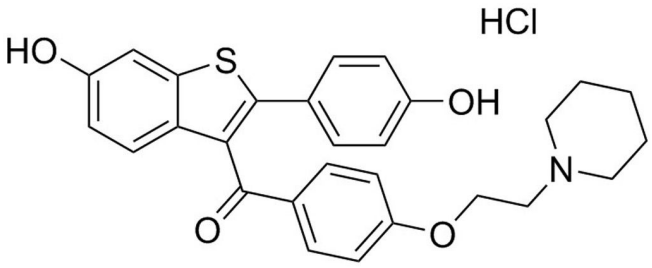
Product Description

Raloxifene modulates estrogen receptor (ER) activity. It is a selective estrogen receptor modulator (SERM) that exhibits agonistic (estrogenic) activity in bone cells without stimulating ER activity in breast or uterine tissues (Black et al.). This product is supplied as the hydrochloride salt of the molecule.

Molecular Name: Raloxifene (Hydrochloride)
Alternative Names: Keoxifene; LY156758
CAS Number: 82640-04-8
Chemical Formula: $C_{28}H_{27}NO_4S \cdot HCl$
Molecular Weight: 510.2 g/mol
Purity: ≥ 98%
Chemical Name: 6-Hydroxy-2-(p-hydroxyphenyl)benzo[b]thien-3-yl-p-(2-piperidinoethoxy)phenyl ketone hydrochloride
Structure:



Properties

Physical Appearance: A crystalline solid

Storage: Product stable at -20°C as supplied. Protect from prolonged exposure to light.
Stable as supplied for 12 months from date of receipt.

Solubility:
· Absolute ethanol ≤ 190 µM
· DMSO ≤ 19 mM
For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 1.96 mL of fresh DMSO.

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 DMSO 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 DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION
· Enhances osteoblast differentiation in mouse bone marrow and human osteoblast cultures (Qu et al.; Viereck et al.).
· Inhibits osteoclast differentiation in primary human bone marrow mononuclear cell cultures (Ramalho et al.).
· Reduces endodermal differentiation (HNF-4α expression) in embryoid bodies derived from human embryonic stem cells (Kim et al.).

References

Black LJ et al. (1994) Raloxifene (LY139481 HCl) prevents bone loss and reduces serum cholesterol without causing uterine hypertrophy in ovariectomized rats. J Clin Invest 93(1): 63–9.
Kim H et al. (2013) The effect of estrogen compounds on human embryoid bodies. Reprod Sci 20(6): 661–9.
Qu Q et al. (1999) Comparative effects of estrogen and antiestrogens on differentiation of osteoblasts in mouse bone marrow culture. J Cell Biochem 73(4): 500–7.
Ramalho AC et al. (2002) Estradiol and raloxifene decrease the formation of multinucleate cells in human bone marrow cultures. Eur Cytokine Netw 13(1): 39–45.
Viereck V et al. (2003) Raloxifene concurrently stimulates osteoprotegerin and inhibits interleukin-6 production by human trabecular osteoblasts. J Clin Endocrinol Metab 88(9): 4206–13.

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