Product Name: Fulvestrant (ICI 182,780)

Chemical Properties

Product Name: Fulvestrant (ICI 182,780)
Cas No.: 129453-61-8
M.Wt: 606.77
Formula: C32H47F5O3S
Synonyms: N/A

Chemical Name: (7R,8R,9S,13S,14S,17S)-13-methyl-7-[9-(4,4,5,5,5-pentafluoropentyl sulfinyl)nonyl]-6,7,8,9,11,12,14,15,16,17-decahydrocyclopenta[a]phenanthrene-3,17-diol
Canonical SMILES: CC12CCC3(C1CCC2O)C(CC4=C3C=CC(=C4)O)CCCCCCCCCS(=O)CCCC(C(F)(F)F)(F)F

Solubility: $\geq 30.35\text{mg/mL}$ in DMSO
Storage: Store at $-20^\circ\text{C}$

General tips: For obtaining a higher solubility, please warm the tube at $37^\circ\text{C}$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^\circ\text{C}$ for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Endocrinology and Hormones
Pathways: Estrogen/progestogen Receptor

Description:
Fulvestran is a newer type of estrogen receptor (ER) antagonist with IC50 value of 9.4nM [1]. Fulvestrant treatment caused a significant decrease in MDM2 protein expression in human breast cancer cell lines MCF7 and T47D, and that the reduction of MDM2 correlated with the decrease in ER expression [1].
Fulvestrant enhances the sensitivity of human breast cancer cells to chemotherapeutic drugs. CompuSyn analyses showed that combined use of doxorubicin, paclitaxel or etoposide with fulvestrant resulted in different degrees of synergism in MCF7 and T47D cell lines tested. Besides, combination of fulvestrant and chemotherapeutic drugs induces altered cell cycle distribution, apoptosis, and senescence [1].

Reference:

Protocol

Cell experiment:

Cell lines T47D and MCF7 breast cancer cell lines

Preparation method The solubility of this compound in DMSO is >30.3mg/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

Applications Treatment of ER+ human breast cancer cell lines, MCF7 and T47D cells with fulvestrant caused a significant decrease in MDM2 protein expression. Treatment with fulvestrant for 16 h or 66 h does not alter MDM2 mRNA level. Fulvestrant (1 μM, 16 h) facilitated degradation of MDM2 protein and shortened half-life of this protein (27 min vs. 42 min in T47D cells; 80 min vs. 180 min in MCF7 cells). Treatment with fulvestrant (5 μM, 72 h) increased the G1 population.

Animal experiment [3]:

Animal models Nude mice bearing MCF-7 and Br10 human breast cancers

Dosage form s.c. injection; 5 mg; 4 weeks

Applications Fulvestrant substantially reduced tumor growth.

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.
Reference:

Product Citations


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