Product Description

Cyclic Pifithrin-Alpha is a cell-permeable and reversible inhibitor of p53-mediated apoptosis and p53-dependent gene transcription. It is a more stable and less cytotoxic analog of the non-cyclic form of pifithrin-alpha, which is rapidly cyclized under normal cell culture conditions. Cyclic Pifithrin-Alpha has also been reported to activate the aryl hydrocarbon receptor (Fernandez-Cruz et al.; Gary & Jensen; Komarov et al.). This product is supplied as a hydrobromide salt of the molecule.

Molecular Name: Cyclic Pifithrin-Alpha (Hydrobromide)
Alternative Names: Cyclic PFT-α; Cyclic Pifithrin-α; PFT-β; Pifithrin-β
CAS Number: 511296-88-1
Chemical Formula: C_{16}H_{16}N_{2}S·HBr
Molecular Weight: 349.3 g/mol
Purity: ≥ 95%
Chemical Name: 5,6,7,8-tetrahydro-2-(4-methylphenyl)-imidazo[2,1-b]benzothiazole, monohydrobromide
Structure:

Properties

Physical Appearance: A crystalline solid
Storage: Product stable at -20°C as supplied. Protect from prolonged exposure to light.
Solubility:
- DMSO ≤ 1.5 mM
- Absolute ethanol ≤ 1.5 mM

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

MAINTENANCE AND SELF-RENEWAL
· Reduces UV-induced apoptosis of mouse embryonic stem cells (Qin et al.).
· Increases the numbers of mouse hematopoietic stem and progenitor cells in vivo and in vitro; also decreases the radiation-induced death of these cells (Leonova et al.).

REPROGRAMMING
· Increases efficiency of reprogramming mouse embryonic fibroblasts to induced pluripotent stem cells (Liao et al.).

References


Related Small Molecules

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