

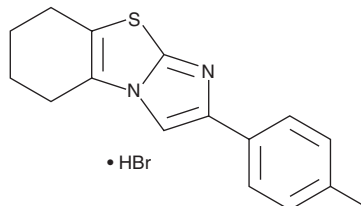
PRODUCT INFORMATION



Cyclic Pifithrin- α (hydrobromide)

Item No. 14748

CAS Registry No.: 511296-88-1
Formal Name: 5,6,7,8-tetrahydro-2-(4-methylphenyl)-imidazo[2,1-b]benzothiazole, monohydrobromide
Synonyms: Cyclic PFT- α , PFT- β , Pifithrin- β
MF: $C_{16}H_{16}N_2S \cdot HBr$
FW: 349.3
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 260 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cyclic Pifithrin- α (PFT- α) (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the cyclic PFT- α (hydrobromide) in the solvent of choice, which should be purged with an inert gas. Cyclic PFT- α (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cyclic PFT- α (hydrobromide) in ethanol and DMSO is approximately 0.5 mg/ml and approximately 10 mg/ml in DMF.

Cyclic PFT- α (hydrobromide) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cyclic PFT- α (hydrobromide) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cyclic PFT- α (hydrobromide) has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Pifithrin- α (PFT- α ; Item No. 13326) is a reversible inhibitor of p53-dependent transcription and apoptosis.¹ Cyclic PFT- α , also known as PFT- β , is a stable analog of PFT- α , formed by the condensation of pifithrin- α in solution.² It inhibits the growth of the cancer cell lines IGROV-1, A2780, and HCT116 (IC_{50} = 23, 77, and 103 μM , respectively).^{2,3} At doses lower than those that inhibit growth, cyclic PFT- α induces autophagy in HCT116 cells and sensitizes IGROV-1 and H460 cells to anti-microtubule agents.^{4,5} In addition, 10 μM cyclic PFT- α blocks p53-dependent protection from DNA damage, induced by hydrogen peroxide or ultraviolet radiation, in melanocytes.⁶

References

1. Komarov, P.G., Komarova, E.A., Kondratov, R.V., *et al. Science* **285**(5434), 1733-1737 (1999).
2. Walton, M.I., Wilson, S.C., Hardcastle, I.R., *et al. Mol. Cancer Ther.* **4**(9), 1369-1377 (2005).
3. Christodoulou, M.S., Colombo, F., Passarella, D., *et al. Bioorg. Med. Chem.* **19**(5), 1649-1657 (2011).
4. Tasdemir, E., Maiuri, M.C., Orhon, I., *et al. Cell Cycle* **7**(19), 3006-3011 (2008).
5. Zuco, V. and Zunino, F. *Neoplasia* **10**(6), 587-596 (2008).
6. Kadekaro, A.L., Chen, J., Yang, J., *et al. Mol. Cancer Res.* **10**(6), 778-786 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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