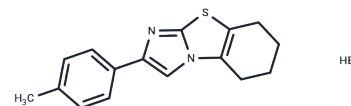


Pifithrin-β hydrobromide

Chemical Properties

CAS No. :	511296-88-1
Formula:	C ₁₆ H ₁₇ BrN ₂ S
Molecular Weight:	349.29
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Pifithrin-β hydrobromide (Cyclic PFT-α) is an inhibitor of p53; reversibly blocks p53-dependent transcriptional activation and apoptosis. Protects against neuronal death in models of stroke and neurodegenerative disorders. Active in vivo; protects mice from the side-effects of Y therapy associated with p53 induction. Suppresses self-renewal of embryonic stem cells. Also aryl hydrocarbon receptor (AHR) agonist, causes upregulation of AHR target gene CYP1A1 (EC ₅₀ = 1.1 μM).
Targets(IC ₅₀)	Ferroptosis,p53
In vitro	PFTα molecule could not take a planar conformation required for AhR activation whereas PFTβ showed a conformation similar to those of the prototypical AhR ligand β-naphthoflavone. In both cell lines, PFTα and PFTβ provoked different responses related with AhR activation. However, when cyclization of PFTα to PFTβ was hampered by acetylation of the exocyclic nitrogen, all these responses were not observed. These results lead to the conclusion that the activation of the AhR is probably caused by PFTβ instead of PFTα.

Solubility Information

Solubility	DMSO: 13.75 mg/mL (39.37 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.863 mL	14.3148 mL	28.6295 mL
5 mM	0.5726 mL	2.863 mL	5.7259 mL
10 mM	0.2863 mL	1.4315 mL	2.863 mL
50 mM	0.0573 mL	0.2863 mL	0.5726 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Christodoulou MS, et al. Synthesis and biological evaluation of imidazolo[2,1-b]benzothiazole derivatives, as potential p53 inhibitors. Bioorg Med Chem. 2011 Mar 1;19(5):1649-57.
Xu D, Xu Y, Cui Q, et al. Cold

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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