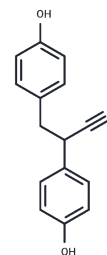


DPN

Chemical Properties

CAS No. : 1428-67-7
Formula: C₁₅H₁₃NO₂
Molecular Weight: 239.27
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	DPN (Diarylpropionitrile) is an selective agonist of estrogen receptor β (ER β) .
Targets(IC50)	Apoptosis,Estrogen Receptor/ERR,Estrogen/progestogen Receptor,Autophagy
In vitro	DPN exhibits a 70-fold higher relative binding affinity for ER β (18%) versus ER α (0.25%), about 80-fold higher transcriptional potency (EC ₅₀ = 0.85 nM versus 66 nM), and 170-fold higher relative potency (4.6% versus 0.025%) in transcription assays[1]

Solubility Information

Solubility	DMSO: 127.5 mg/mL (532.87 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (8.36 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1794 mL	20.8969 mL	41.7938 mL
5 mM	0.8359 mL	4.1794 mL	8.3588 mL
10 mM	0.4179 mL	2.0897 mL	4.1794 mL
50 mM	0.0836 mL	0.4179 mL	0.8359 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Marvin, J, Meyers, et al. Estrogen Receptor- β Potency-Selective Ligands: Structure-Activity Relationship Studies of Diarylpropionitriles and Their Acetylene and Polar Analogues[J]. Journal of Medicinal Chemistry, 2001.

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Tong H, Fan S, Hu W, et al. Diarylpropionitrile-stimulated ER β nuclear accumulation promotes MyoD-induced muscle regeneration in mdx mice by interacting with FOXO3A. Pharmacological Research. 2024: 107376.

Huang S Y, Xin H, Sun J, et al. Estrogen receptor β agonist diarylpropionitrile inhibits lipopolysaccharide-induced regulated on activation normal T cell expressed and secreted (RANTES) production in macrophages by repressing nuclear factor κ B activation[J]. Fertility and Sterility, 2013, 100(1):234-240.

Zhang D, Lu Z, He Y, et al. Discovery of Thiochroman Derivatives as Potent, Oral Selective Estrogen Receptor Degradable and Antagonists for the Treatment of Endocrine-Resistant Breast Cancer. Journal of Medicinal Chemistry. 2024

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