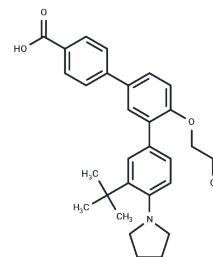


trifarotene

Chemical Properties

CAS No. :	895542-09-3
Formula:	C ₂₉ H ₃₃ N ₁ O ₄
Molecular Weight:	459.58
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	Trifarotene (CD5789) is a potent and selective RAR γ agonist, exhibiting 65-fold and 16-fold selectivity for RAR γ (EC ₅₀ =7.7 nM) over RAR α (EC ₅₀ =500 nM) and RAR β (EC ₅₀ =125 nM).
Targets(IC50)	Retinoid Receptor, Autophagy
In vitro	Administration of trifarotene involves in keratinization, desquamation, cornification and cell adhesion in reconstructed human epidermis (RHE) with the mean EC ₅₀ on the combined target genes of 0.0048%[2].
In vivo	In rhino mice, administration of 0.001%–0.01% Trifarotene shows dose-dependent comedolytic activity. Being fully efficacious at 0.01% with reduction of 98%[2].

Solubility Information

Solubility	DMSO: 250 mg/mL (543.97 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: 5 mg/mL (10.88 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	2.1759 mL	10.8795 mL	21.759 mL
5 mM	0.4352 mL	2.1759 mL	4.3518 mL
10 mM	0.2176 mL	1.0879 mL	2.1759 mL
50 mM	0.0435 mL	0.2176 mL	0.4352 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

Etienne Thoreau, et al. Structure-based design of Trifarotene (CD5789), a potent and selective RAR γ agonist for the treatment of acne. *Bioorg Med Chem Lett.* 2018 Jun 1;28(10):1736-1741.

J Aubert, et al. Nonclinical and human pharmacology of the potent and selective topical retinoic acid receptor- γ agonist trifarotene. *Br J Dermatol.* 2018 Aug;179(2):442-456.

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