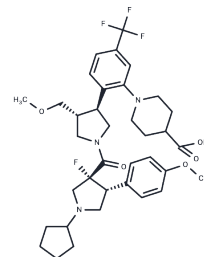


## Dersimelagon

## Chemical Properties

CAS No. :	1835256-48-8
Formula:	C36H45F4N3O5
Molecular Weight:	675.75
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	Dersimelagon (MT-7117) is an orally active, selective melanocortin 1 receptor (MC1R) agonist with EC50 values of 8.16, 3.91, 1.14, and 0.251 nM for human (h), cynomolgus monkey (cm), mouse (m), and rat (r) MC1R, respectively. Dersimelagon exhibits good affinity for hMC1R and hMC4R, with Ki values of 2.26 and 32.9 nM, respectively. Dersimelagon can be used in the study of skin pigmentation[1].
Targets(IC50)	Melanocortin Receptor
In vitro	<b>METHODS:</b> B16F1 cells were treated with Dersimelagon (MT-7117) (0, 0.03, 0.1, 0.3, 1, 3, 10, 30, 100, 300 pM; 3 days) to evaluate the ability of Dersimelagon (MT-7117) to induce eumelanin production. <b>RESULTS</b> Dersimelagon (MT-7117) increased eumelanin production in a concentration-dependent manner with an EC50 of 13 pM in B16F1 cells. [1]
In vivo	<b>METHODS:</b> Dersimelagon (MT-7117) (0.003, 0.03, 0.3, 3 mg/kg; oral administration for 6 days) was used to observe the effect of Dersimelagon (MT-7117) on the hair of Ay/a mice. <b>RESULTS</b> MT-7117 induced the synthesis of eumelanin, but not pheomelanin, in the hair roots of Ay/a mice. [1]

## Solubility Information

Solubility	DMSO: 6.76 mg/mL (10 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: 1 mg/mL (1.48 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

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.4798 mL	7.3992 mL	14.7984 mL
5 mM	0.296 mL	1.4798 mL	2.9597 mL
10 mM	0.148 mL	0.7399 mL	1.4798 mL
50 mM	0.0296 mL	0.148 mL	0.296 mL

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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

Suzuki T, et al. Melanogenic effect of dersimelagon (MT-7117), a novel oral melanocortin 1 receptor agonist. *Skin Health Dis.* 2021 Nov 29;2(1):e78.

Erwin AL, et al. Porphyrias in the Age of Targeted Therapies. *Diagnostics (Basel).* 2021 Sep 29;11(10):1795.

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