Product Data Sheet

Tafamidis

Cat. No.: HY-14852 CAS No.: 594839-88-0 Molecular Formula: $C_{14}H_7Cl_2NO_3$ Molecular Weight: 308.12

Target: Transthyretin (TTR)

Pathway: **Neuronal Signaling**

Storage: Powder -20°C 3 years

4°C 2 years

In solvent -80°C 2 years

> -20°C 1 year

SOLVENT & SOLUBILITY

In Vitro

DMSO: 37.5 mg/mL (121.71 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	3.2455 mL	16.2274 mL	32.4549 mL
	5 mM	0.6491 mL	3.2455 mL	6.4910 mL
	10 mM	0.3245 mL	1.6227 mL	3.2455 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (8.11 mM); Suspended solution; Need ultrasonic
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (8.11 mM); Suspended solution; Need ultrasonic
- 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Tafamidis is a potent and selective transthyretin (TTR) stabilizer, shows comparable potency and efficacy to the mutumant homotetramers V30M-TTR, V122I-TTR and wild type WT-TTR, with EC ₅₀ s of 2.7-3.2 μ M. Tafamidis inhibits amyloidogenesis ^[1] .
IC ₅₀ & Target	EC50: 2.7-3.2 μM (TTR) ^[1]
In Vitro	Tafamidis binds selectively and with negative cooperativity ($K_ds \boxtimes 2 \text{ nM}$ and $\boxtimes 200 \text{ nM}$) to the two normally unoccupied thyroxine-binding sites of the tetramer, and kinetically stabilizes $TTR^{[1]}$.

Tafamidis (0-7.2 μ M) dose-dependently inhibits WT-TTR amyloidogenesis after treatment for 72 hours at a pH of 4.4-4.5^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

• J Med Chem. 2021 Sep 21.

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REFERENCES

[1]. Bulawa, C.E., et al., Tafamidis, a potent and selective transthyretin kinetic stabilizer that inhibits the amyloid cascade. Proc Natl Acad Sci U S A, 2012. 109(24): p. 9629-34.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA