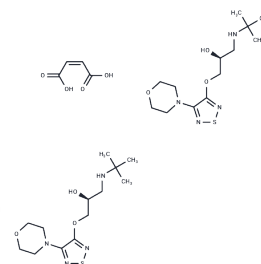


## Timolol hemimaleate

## Chemical Properties

CAS No. :	33305-95-2
Formula:	C <sub>13</sub> H <sub>24</sub> N <sub>4</sub> O <sub>3</sub> S.1/2C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>
Molecular Weight:	374.45
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	Timolol hemimaleate ((S)-L-714,465; MK 950), a $\beta$ -blocker, is formulated for both systemic and topical use. It is commonly applied topically to decrease intraocular pressure in cases of open-angle glaucoma and ocular hypertension. Additionally, it is utilized in research for the treatment of infantile hemangiomas, hypertension, myocardial infarction, migraine prophylaxis, and atrial fibrillation. Moreover, Timolol has been recognized for its cardioprotective effects [1] [2].
Targets(IC50)	Adrenergic Receptor
In vitro	Timolol hemimaleate significantly prevents increased lipid peroxidation in the hearts of diabetic rats, induces a balanced ratio between oxidative stress and antioxidant defense, and provides important cardioprotection against diabetes-induced ERS and associated apoptotic effects [3].
In vivo	Timolol hemimaleate exhibits cardioprotective effects in diabetic rats by inhibiting the ERS response [3]. Animal model: 3-month-old male Wistar rats [3]. Dosage: 5 mg/kg. Administration: 5 mg/kg daily for 12 weeks. Result: Demonstrated cardioprotective effects.

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6706 mL	13.3529 mL	26.7058 mL
5 mM	0.5341 mL	2.6706 mL	5.3412 mL
10 mM	0.2671 mL	1.3353 mL	2.6706 mL
50 mM	0.0534 mL	0.2671 mL	0.5341 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.

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