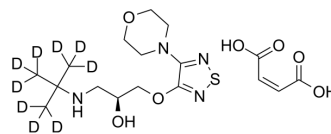


## (S)-Timolol-d<sub>9</sub> maleate

<b>Cat. No.:</b>	HY-17380S
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>19</sub> D <sub>9</sub> N <sub>4</sub> O <sub>7</sub> S
<b>Molecular Weight:</b>	441.55
<b>Target:</b>	Adrenergic Receptor; Isotope-Labeled Compounds
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	(S)-Timolol-d <sub>9</sub> (maleate) is deuterium labeled (S)-Timolol (Maleate). (S)-Timolol Maleate (L-714,465 Maleate) is a non-cardioselective hydrophilic β-adrenoceptor blocker. (S)-Timolol Maleate is widely used as standard medication for intraocular pressure (glaucoma) by preventing the production of aqueous humor. (S)-Timolol Maleate can be used for hypertension, angina pectoris and myocardial infarction[1][2][3].
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Mitrović M, et al. Analytical quality by design development of an ecologically acceptable enantioselective HPLC method for timolol maleate enantiomeric purity testing on ovomucoid chiral stationary phase. *J Pharm Biomed Anal*. 2020 Feb 20;180:113034.
- [3]. Sun L, et al. Fractional 2940-nm Er:YAG Laser-Assisted Drug Delivery of Timolol Maleate for the Treatment of Deep Infantile Hemangioma. *J Dermatol Treat*. 2020 Feb 11:1-24.
- [4]. Wedian F, et al. Simultaneous spectrofluorometric analysis of tablets containing hydrochlorothiazide combined with timolol maleate or amiloride hydrochloride. *Acta Pharm*. 2020 Sep 1;70(3):373-385.

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

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