# Azilsartan medoxomil

**Cat. No.:** HY-14736

**CAS No.:** 863031-21-4

**Molecular Formula:** $C_{30}H_{24}N_4O_8$

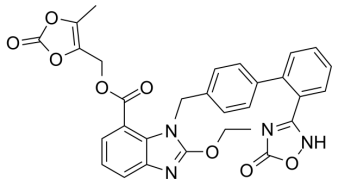
**Molecular Weight:** 568.53

**Target:** Angiotensin Receptor

**Pathway:** GPCR/G Protein

**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 : 125 mg/mL (219.87 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.7589 mL | 8.7946 mL | 17.5892 mL |
| | 5 mM | 0.3518 mL | 1.7589 mL | 3.5178 mL |
| | 10 mM | 0.1759 mL | 0.8795 mL | 1.7589 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: ≥ 2.08 mg/mL (3.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.66 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Azilsartan medoxomil (TAK 491) is an orally administered angiotensin II receptor type 1 antagonist with $IC_{50}$ of 0.62 nM, which used in the treatment of adults with essential hypertension[1][2][3][4].

**$IC_{50}$ & Target**

AT1 Receptor

**In Vivo**

Azilsartan medoxomil (0.03-1 mg/kg, p.o.) inhibits the angiotensin II-induced pressor response innormotensive rats[2].
Azilsartan medoxomil (0.1-10 mg/kg in peanut butter, once daily) inhibits vascular wall expression of plasminogen activator inhibitor type-I (PAI-1) protein, and potentially facilitates the stabilization of atherosclerotic plaques in ApoE knockout mice on a high fat diet rendered overexpressors of PAI-1 in VSMCs[5].
Azilsartan medoxomil (0.03-10 mg/kg, oral gavage, once a day) reduces myocardial infarct size in rats[6].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Rats[6] |
| Dosage: | 0.03-10 mg/kg |
| Administration: | oral gavage, once a day for 4 days |
| Result: | Reduced myocardial infarct size.<br>Increased calcium-dependent nitric oxide synthase activity.<br>Increased Akt, ERK 1/2 and eNOS phosphorylation and inhibited BAX activation. |

## REFERENCES


[1]. French CJ, et al. The angiotensin receptor blocker, azilsartan medoxomil (TAK-491), suppresses vascular wall expression of plasminogen activator inhibitor type-I protein potentially facilitating the stabilization of atherosclerotic plaques. J Cardiovasc Pharmacol. 2011 Aug;58(2):143-8.

[2]. Ye Y, et al. Additive effect of TAK-491, a new angiotensin receptor blocker, and pioglitazone, in reducing myocardial infarct size. Cardiovasc Drugs Ther. 2010 Apr;24(2):107-20.

[3]. Kajiya T, Ho C, Wang J, Molecular and cellular effects of azilsartan: a new generation angiotensin II receptor blocker. J Hypertens. 2011 Dec;29(12):2476-83.

[4]. Kusumoto K, Igata H, Ojima M, Antihypertensive, insulin-sensitising and renoprotective effects of a novel, potent and long-acting angiotensin II type 1 receptor blocker, azilsartan medoxomil, in rat and dog models.

[5]. Perry CM. Azilsartan medoxomil: a review of its use in hypertension. Clin Drug Investig. 2012 Sep 1;32(9):621-39.

[6]. Pierini D, Anderson KV. Azilsartan medoxomil/chlorthalidone: a new fixed-dose combination antihypertensive. Ann Pharmacother. 2013 May;47(5):694-703.





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