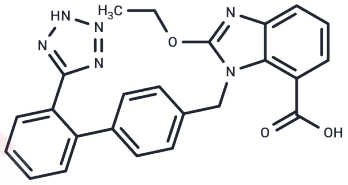
Data Sheet (Cat.No.T1461)

TargetMol

Candesartan

Chemical Properties



CAS No. : 139481-59-7

Formula: C24H20N6O3

Molecular Weight: 440.47

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Candesartan (CV 11974) is an angiotensin II receptor blocker widely used in the treatment of hypertension and heart failure.
Targets(IC50)	RAAS
In vitro	In mice carrying KU-19-19 xenografts, Candesartan (10 mg/kg) reduced microvascular density and VEGF expression, inhibiting tumor cell growth. In WKY rats, a lower dose of Candesartan (0.5 mg/kg) decreased blood pressure and inhibited the binding of AT1 in various brain regions, including the subfornical organ, paraventricular nucleus of the hypothalamus, solitary tract nucleus, and the area postrema. Furthermore, in adult spontaneously hypertensive rats, Candesartan (0.3 mg/kg) reduced the infarct size, diminished severe ischemic lesions in the peri-infarct and subcortical areas, and lessened the decrease in cerebral blood flow.
In vivo	In CHO-AT1 cells, Candesartan binds with high selectivity to the angiotensin II AT1 receptors. At a concentration of 0.1 nM, Candesartan can reduce the maximum constrictive response to angiotensin II. Additionally, in KU-19-19 cells, the introduction of Candesartan leads to an upregulation of VEGF and interleukin-8 expression, without affecting cell proliferation.
Kinase Assay	Binding assay: Cells are plated in 24-well plates and cultured until confluence. Before the experiment, the cells are washed three times with 0.5 mL per well of DMEM at room temperature. After removal of the medium, 400 µL binding DMEM is added and the plate is then left for 15 min at 37 ℃. For saturation binding assays cells are incubated with increasing concentrations [3H]Candesartan (final concentrations between 0.15 nM and 15 nM) in a final volume of 0.5 mL at 37 ℃ for 5 min to 180 min. For competition binding assays 50 µL of buffer or 50 µL of buffer containing increasing concentrations of unlabelled Candesartan is added. After 30 min, 50 µL of buffer containing [3H] Candesartan (final concentration 1.1 nM) or [3H]Candesartan (final concentration 1.0 nM) is added, and the cells are further incubated for 30 min at 37 ℃.
Cell Research	KU-19-19 cells are seeded at a cell density of 2 × 104 per well in 96-well plates and allowed to grow overnight. Then the cells are treated with various concentrations of Candesartan for various periods of time. Cell viability is determined by the Alamar Blue assay to examine the cytotoxicity and antiproliferative effect of candesartan. The absorbance value of each well is determined in a microplate reade(Only for Reference)

Solubility Information

Solubility	DMSO: 4.5 mg/mL (10.22 mM),Sonication is recommended. Ethanol: 0.4 mg/mL (10 mM)),Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2703 mL	11.3515 mL	22.703 mL
5 mM	0.4541 mL	2.2703 mL	4.5406 mL
10 mM	0.227 mL	1.1352 mL	2.2703 mL
50 mM	0.0454 mL	0.227 mL	0.4541 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.

Reference

Fierens F, et al. Eur J Pharmacol, 1999, 367(2-3), 413-422.
Kosugi M, et al. Clin Cancer Res, 2006, 12(9), 2888-2893.
Ojima M, et al. Eur J Pharmacol, 1997, 319(1), 137-146.
Nishimura Y, et al. Brain Res, 2000, 871(1), 29-38.
Ito T, et al. Stroke, 2002, 33(9), 2297-2303.