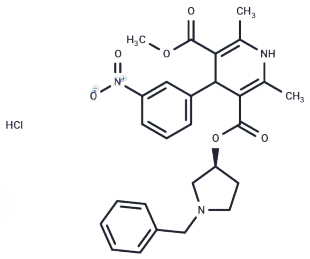
Data Sheet (Cat.No.T5856)

TargetMol

Barnidipine hydrochloride

Chemical Properties



CAS No. :	104757-53-1
Formula:	C27H30ClN3O6
Molecular Weight:	528
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	Barnidipine hydrochloride (YM-09730-5 hydrochloride) is a dihydropyridine calcium channel blocker that has an IC50 value of 0.35 nM in potassium-induced tonic contraction of pig coronary artery
Targets(IC50)	Calcium Channel
In vivo	Barnidipine demonstrates antihypertensive activity by reducing peripheral vascular resistance. It decreases blood pressure in spontaneously hypertensive rats when administered orally at 1 and 3 mg/kg per day[1]. Formulations containing barnidipine have been used as a treatment for hypertension. In obstructive sleep apnea patients with non-dipper pattern hypertension, barnidipine reduced mean nighttime systolic and diastolic arterial blood pressure[2].
Animal Research	Forty-one patients (mean age 69 ± 17 years, 18 females) with previously diagnosed OSA (by reduced channel home-based polysomnography) who were not being treated with continuous positive airway pressure (CPAP) because of contraindications or because of patient intolerance or rejection were evaluated. Non-dipper status was defined as the presence of a nighttime fall in systolic blood pressure (BP) which was < 10% that of daytime systolic BP as observed in a previous ambulatory blood pressure (ABP) monitoring. OSA was defined according to the presence of 5 or more episodes per hour of apnoea, hypopnoea or arousal due to respiratory effort. The reproducibility of non-dipping status was confirmed through a second 24-h ABP monitoring performed at baseline. On top of the previous stable treatment regimen (which excluded calcium-channel blockers), a 10 mg dosing of barnidipine hydrochloride at bedtime was added to all subjects during a 12-week period[2].

Solubility Information

Solubility	DMSO: 250 mg/mL (473.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (9.47 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8939 mL	9.4697 mL	18.9394 mL
5 mM	0.3788 mL	1.8939 mL	3.7879 mL
10 mM	0.1894 mL	0.947 mL	1.8939 mL
50 mM	0.0379 mL	0.1894 mL	0.3788 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.

Reference

Kawashima K , Toda H , Oohata H , et al. Antihypertensive and diuretic effects of YM-09730-5, a new calcium antagonist, in stroke-prone spontaneously hypertensive rats[J]. Gen Pharmacol, 1991, 22(2):263-266.
Giuseppe C , Luisa F M , Antonino C , et al. Effect of Bedtime Dosing of Barnidipine Hydrochloride in Nondipper Hypertensive Patients with Obstructive Sleep Apnoea not Treated with Continuous Positive Airway Pressure[J]. Journal of Clinical Hypertension, 2013, 15(2):339.