

Product Name: Carvedilol

Catalog No.: 2685

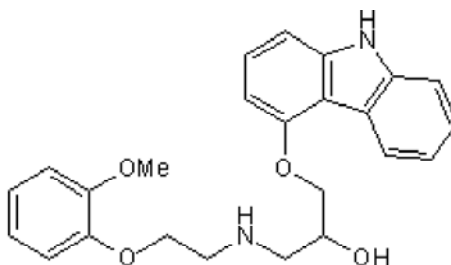
Batch No.: 2

CAS Number: 72956-09-3

IUPAC Name: 1-(9*H*-Carbazol-4-yloxy)-3-[[2-(2-methoxyphenoxy)ethyl]amino]-2-propanol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₄H₂₆N₂O₄.
Batch Molecular Weight: 406.47
Physical Appearance: Off White solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.92	6.45	6.89
Found	70.86	6.36	6.82

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Carvedilol is a potent β -adrenoceptor and α_1 -adrenoceptor antagonist (K_i values are 0.81, 0.96 and 2.2 nM for β_1 -, β_2 - and α_1 -adrenoceptors respectively) that displays antihypertensive and peripheral vasodilatory activity. Blocks cardiac inward-rectifier K^+ (K_{IR}) channels, voltage-dependent Ca^{2+} channels and exhibits antioxidant properties at higher concentrations.

Physical and Chemical Properties:

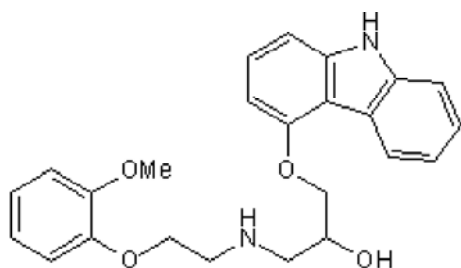
Batch Molecular Formula: $C_{24}H_{26}N_2O_4$.

Batch Molecular Weight: 406.47

Physical Appearance: Off White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Kikuta et al (2006) Carvedilol blocks cardiac K_{ATP} and K_G but not I_{K1} channels by acting at the bundle-crossing region. *Eur.J.Pharmacol.* **529** 47. PMID: 16325804.

Ponicke et al (2002) Differential effects of bucindolol and carve. on noradrenaline-induced hypertonic response in ventricular cardiomyocytes of adult rats. *J.Pharmacol.Exp.Ther.* **301** 71. PMID: 11907159.

Ohlstein et al (1993) Carvedilol, a cardiovascular drug, prevents vascular smooth muscle cell proliferation, migration, and neointimal formation following vascular injury. *Proc.Natl.Acad.Sci.USA.* **90** 6189. PMID: 8327499.

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