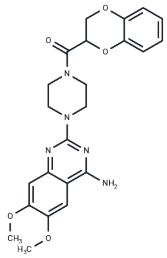
# Data Sheet (Cat.No.T22316)

TargetMol

## Doxazosin

### Chemical Properties



CAS No. : 74191-85-8

Formula: C23H25N5O5

Molecular Weight: 451.48

Storage: Keep away from direct sunlight,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Doxazosin (UK 33274) is a long-acting α1-adrenoceptor inhibitor widely used to treat benign prostatic hyperplasia and lower urinary tract symptoms. |
| Targets(IC50) | Adrenergic Receptor |
| In vitro | Doxazosin, at concentrations of 5-20 mumol/L, increased LDL binding to hepatic cells in a dose-related manner. Also, in these hepatic cells, doxazosin produced dose-related decreases in both newly synthesized cholesterol and cholesterol ester. In rabbit fibroblasts that were LDL receptor negative, de novo cholesterol synthesis was markedly reduced by increasing concentrations of doxazosin. Taken together, these results suggest that doxazosin may have a direct inhibitory effect on cholesterol synthesis independent of the LDL receptor[2]. |
| In vivo | Both the enantiomers were highly bound to the plasma proteins of rats, dogs and humans [(-)doxazosin: 89.4%-94.3%; (+)doxazosin: 90.9%-95.4%]. (+)Doxazosin exhibited significantly higher protein binding capacities than (-)doxazosin in all the three species, and the difference in the bound concentration (Cb) between the two enantiomers was enhanced as their concentrations were increased. Although the percentage of the plasma protein binding in the dog plasma was significantly lower than that in the human plasma at 400 and 800 ng/mL, the corrected percentage of plasma protein binding was dog>human>rat[3]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 30 mg/mL (66.45 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.2149 mL | 11.0747 mL | 22.1494 mL |
| 5 mM | 0.443 mL | 2.2149 mL | 4.4299 mL |
| 10 mM | 0.2215 mL | 1.1075 mL | 2.2149 mL |
| 50 mM | 0.0443 mL | 0.2215 mL | 0.443 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

Miura, Y. and K. Yoshinaga, Doxazosin: a newly developed, selective alpha 1-inhibitor in the management of patients with pheochromocytoma. Am Heart J, 1988. 116(6 Pt 2): p. 1785-9.
D'Eletto, R.D. and N.B. Javitt, Effect of doxazosin on cholesterol synthesis in cell culture. J Cardiovasc Pharmacol, 1989. 13 Suppl 2: p. S1-4; discussion S4.
Sun, J.A., et al., Stereoselective binding of doxazosin enantiomers to plasma proteins from rats, dogs and humans in vitro. Acta Pharmacol Sin, 2013. 34(12): p. 1568-74.