



Product Information

Product ID V0146

CAS No. 137862-53-4

Chemical Name N-(1-Oxopentyl)-N-[[2'-1H-tetrazol-5-yl][1,1'-biphenyl]-4-yl]methyl]-L-valine

Synonym Diovan, Tareg

Formula C₂₄H₂₉N₅O₃

Formula Wt. 435.52

Melting Point 116-117°C

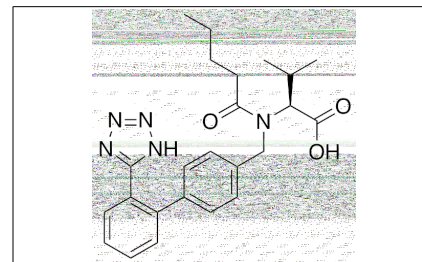
Purity ≥98%

Solubility Solubility in DMSO - 20 mg/mL.
Sparingly soluble in aqueous medium.

Store Temp Ambient

Ship Temp Ambient

Description Valsartan is an angiotensin II (ATII) type 1 receptor (AT1) inhibitor that is clinically used to lower blood pressure and coronary resistance, and to decrease cardiac hypertrophy. Valsartan exhibits antihypertensive, cardioprotective, neuroprotective, anti-angiogenic, and anti-inflammatory activities. Inhibition of the ATII type 1 receptor results in inhibition of NF-κB and AP-1 activation. Valsartan induces autophagy through alteration of Akt/mTOR signaling in the rat heart, decreasing infarct size in an ischemia-reperfusion model. In neurons, valsartan promotes spinogenesis, increasing the number of AMPA receptors on the cell surface and altering levels of CaMKIIα and phospho-CDK5. In vivo, valsartan prevents induction of cardiotrophin-1, inhibiting increases in creatine kinase, atrial natriuretic peptide, and the heart weight/body weight ratio during heart failure. Additionally, inhibition of the angiotensin II type 1 (AT1) receptor prevents phosphorylation of Akt and decreases expression of VEGF in bone marrow stromal cells. Valsartan also inhibits release of pro-inflammatory cytokines such as IL-6, TNF-α, and IL-1β independent of its activity on ATII type 1 receptors.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
V0146	50 mg	\$54.60
V0146	1 g	\$63.00
V0146	5 g	\$113.30
V0146	25 g	\$415.10

References Wu X, He L, Cai Y, et al. Induction of autophagy contributes to the myocardial protection of valsartan against ischemia reperfusion injury. *Mol Med Rep.* 2013 Dec;8(6):1824-30. PMID: 24084854.

Sohn YI, Lee NJ, Chung A, et al. Antihypertensive drug Valsartan promotes dendritic spine density by altering AMPA receptor trafficking. *Biochem Biophys Res Commun.* 2013 Oct 4;439(4):464-70. PMID: 24012668.

Cheng CI, Hsiao CC, Wu SC, et al. Valsartan impairs angiogenesis of mesenchymal stem cells through Akt pathway. *Int J Cardiol.* 2013 Sep 10;167(6):2765-74. PMID: 22805546.

Al-Mazroua HA, Al-Rasheed NM, Korashy HM. Downregulation of the cardiotrophin-1 gene expression by valsartan and spironolactone in hypertrophied heart rats in vivo and rat cardiomyocyte H9c2 cell line in vitro: a novel mechanism of cardioprotection. *J Cardiovasc Pharmacol.* 2013 Apr;61(4):337-44. PMID: 23288202.

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Müller DN, Mervaala EM, Dechend R, et al. Angiotensin II (AT1) receptor blockade reduces vascular tissue factor in angiotensin II-induced cardiac vasculopathy. *Am J Pathol.* 2000 Jul;157(1):111-22. PMID: 10880382.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.