



LKT Laboratories, Inc.

Voglibose

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## Product Information

Product ID V5725

CAS No. 83480-29-9

Chemical Name (1S,2S,3R,4S,5S)-5-(1,3-dihydroxypropan-2-ylamino)-1-(hydroxymethyl)cyclohexane-1,2,3,4-tetrol

Synonym Glustat; Basen; AO-128; Vocarb; 3,4-dideoxy-4-(2-hydroxy-1-(hydroxymethyl)ethylamino)-2-C-(hydroxymethyl)-D-epi-inositol

Formula  $C_{10}H_{21}NO_7$

Formula Wt. 267.28

Melting Point 162 -164 °C

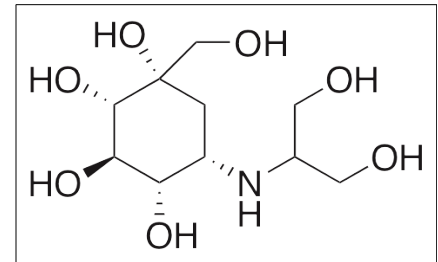
Purity ≥98%

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Voglibose is an inhibitor of  $\alpha$ -glucosidase that exhibits anti-diabetic, anti-hyperglycemic, anti-hyperlipidemic, anti-melanogenic, and cardioprotective benefits. In obese mice, voglibose increases plasma levels of glucagon-like peptide 1 (GLP-1), indirectly decreasing activity of DPP4. Additionally, voglibose decreases expression of intracellular adhesion molecule 1 (ICAM-1) and excretion of C-reactive protein (CRP), also decreasing oxidative stress. In clinical studies, voglibose improves body mass index and hemoglobin A(1c) values and decreases hyperlipidemia and hyperglycemia. Inhibition of  $\alpha$ -glucosidase also blocks N-glycan modification of tyrosinase, decreasing levels of tyrosinase and melanin. In several animal models of myocardial ischemia/reperfusion, voglibose upregulates phosphorylated Akt and phosphorylated eNOS expression, decreasing myocardial infarction size; this compound may also activate GLP-1 receptors or open mitochondrial  $K^+$  (ATP) channels,



## Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
V5725	5 mg	\$71.70
V5725	10 mg	\$125.60
V5725	25 mg	\$249.30
V5725	100 mg	\$738.40

**References** Bin BH, Seo J, Yang SH, et al. Novel inhibitory effect of the antidiabetic drug voglibose on melanogenesis. *Exp Dermatol*. 2013 Aug;22(8):541-6. PMID: 23879813.

Iwasa M, Kobayashi H, Yasuda S, et al. Antidiabetic drug voglibose is protective against ischemia-reperfusion injury through glucagon-like peptide 1 receptors and the phosphoinositide 3-kinase-Akt-endothelial nitric oxide synthase pathway in rabbits. *J Cardiovasc Pharmacol*. 2010 Jun;55(6):625-34. Erratum in: *J Cardiovasc Pharmacol*. 2012 Jul;60(1):108. PMID: 20351564.

Kawamori R, Tajima N, Iwamoto Y, et al. Voglibose for prevention of type 2 diabetes mellitus: a randomised, double-blind trial in Japanese individuals with impaired glucose tolerance. *Lancet*. 2009 May 9;373(9675):1607-14. PMID: 19395079.

Moritoh Y, Takeuchi K, Hazama M. Chronic administration of voglibose, an alpha-glucosidase inhibitor, increases active glucagon-like peptide-1 levels by increasing its secretion and decreasing dipeptidyl peptidase-4 activity in ob/ob mice. *J Pharmacol Exp Ther*. 2009 May;329(2):669-76. PMID: 19208898.

Satoh N, Shimatsu A, Yamada K, et al. An alpha-glucosidase inhibitor, voglibose, reduces oxidative stress markers and soluble intercellular adhesion molecule 1 in obese type 2 diabetic patients. *Metabolism*. 2006 Jun;55(6):786-93. PMID: 16713439.

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