



LKT Laboratories, Inc.

Exendin-4

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Product Information

Product ID E9417

CAS No. 141758-74-9

Chemical Name

Synonym Exenatide, Exendin 4 (*Heloderma suspectum*)

Formula C₁₈₄H₂₈₂N₅₀O₆₀S

Formula Wt. 4186.03

Melting Point

Purity ≥95%

Solubility Soluble in water (1 mg/mL),
DMSO.

Store Temp -20° C

Ship Temp Ambient

Description Exendin-4 is an analog of glucagon-like peptide 1 (GLP-1); it acts as an agonist at GLP-1 receptors. Exendin-4 exhibits cardioprotective, anti-inflammatory, and antioxidative activities. In mesangial cells, exendin-4 increases phosphorylation of AMPK and decreases phosphorylation of ERK, inhibiting fibronectin secretion and cell proliferation. In animal models of cardiac ischemia/reperfusion, exendin-4 decreases levels of high-mobility group box 1 (HMGB1), lactate dehydrogenase (LDH), creatine kinase, and malondialdehyde (MDA) and prevents decreases in superoxide dismutase (SOD) levels, decreasing infarct size. Additionally, this compound inhibits ox-LDL-induced migration of macrophages, increases in matrix metalloproteinase-9 (MMP9), and activation of NF-κB in vitro. In other cellular models, exendin-4 suppresses increases in ROS, activation of caspases, and release of cytochrome c, preventing oxidative damage and mitochondria-mediated apoptosis. Exendin-4 was originally found in *Heloderma* lizards. Like other GLP-1 agonists, this compound may exhibit anti-diabetic activity.

H-His-Gly-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH₂

Bulk quantities available upon request

Product ID	Size
E9417	0.5 mg
E9417	1 mg
E9417	2.5 mg

References Xu WW, Guan MP, Zheng ZJ, et al. Exendin-4 Alleviates High Glucose-Induced Rat Mesangial Cell Dysfunction through the AMPK Pathway. *Cell Physiol Biochem*. 2014;33(2):423-32. PMID: 24556697.

Hu G, Zhang Y, Jiang H, et al. Exendin-4 attenuates myocardial ischemia and reperfusion injury by inhibiting high mobility group box 1 protein expression. *Cardiol J*. 2013;20(6):600-4. PMID: 24338536.

Ma GF, Chen S, Yin L, et al. Exendin-4 ameliorates oxidized-LDL-induced inhibition of macrophage migration in vitro via the NF-κB pathway. *Acta Pharmacol Sin*. 2014 Feb;35(2):195-202. PMID: 24335838.

Li Z, Zhou Z, Huang G, et al. Exendin-4 protects mitochondria from reactive oxygen species induced apoptosis in pancreatic Beta cells. *PLoS One*. 2013 Oct 24;8(10):e76172. PMID: 24204601.

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