

Name of Journal: *World Journal of Diabetes*

Manuscript NO: 61279

Manuscript Type: ORIGINAL ARTICLE

Basic Study

Vascular endothelial growth factor B inhibits insulin secretion in MIN6 cells and reduces Ca²⁺ and cyclic adenosine monophosphate levels through the PI3K/AKT pathway

Study on the mechanism of insulin secretion

Abstract

BACKGROUND

Type 2 diabetes (T2D) is characterized by insufficient insulin secretion caused by defective pancreatic β -cell function or insulin resistance, resulting in an increase in blood glucose. However, the mechanism involved in this lack of insulin secretion is unclear. The level of vascular endothelial growth factor B (VEGF-B) is significantly

Match Overview

1	Internet 27 words urn.fi	<1%
2	Crossref 25 words S. Zraika. "Oxidative stress is induced by islet amyloid for... ation and time-dependently mediates amyloid-induced beta	<1%
3	Internet 19 words crawled on 06-Aug-2020 www.freepatentsonline.com	<1%
4	Internet 14 words crawled on 20-Oct-2020 portlandpress.com	<1%
5	Internet 14 words crawled on 19-Jul-2020 pubs.rsc.org	<1%
6	Internet 13 words crawled on 04-Sep-2020 core.ac.uk	<1%
7	Internet 12 words crawled on 03-Feb-2021 onlinelibrary.ectrims-congress.eu	<1%
8	Internet 12 words crawled on 11-Aug-2020 www.frontiersin.org	<1%

ALL

IMAGES

VIDEOS

15,400 Results

Any time ▼

Pharmacological regulation of insulin secretion in MIN6 ...

<https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1038/sj.bjp.0706770>

Jan 29, 2009 · Here, we used the agonist GW9508 and antagonist GW1100 to examine further the role GPR40 might play in glucose-dependent **insulin secretion** using the **MIN6** mouse insulinoma **cell** line. GW9508 produced a concentration-dependent increase (pEC 50 = 6.14 ± 0.03; n = 3) in glucose-stimulated **insulin secretion** at high glucose **levels** (25 m M).

Cited by: 412

Author: Celia P Briscoe, Andrew J Peat, Stephe...

Publish Year: 2006

Simvastatin Impairs Insulin Secretion by Multiple ...

journals.plos.org/plosone/article?id=10.1371/journal.pone.0142902 ▼

Nov 11, 2015 · Accordingly, the **cAMP** activator forskolin stimulated **insulin secretion** from **MIN6 cells** even in **Ca²⁺**-free conditions in our study. **cAMP** is known to stimulate both the first phase of **insulin secretion**, formed by the **Ca²⁺** influx **through** VGCCs acting on a limited set of readily releasable secretory granules, and the second phase of **insulin** ...

Glucagon-like Incretins Regulate Beta-Cell Glucose Competence by ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4110016>

An important component of the action of GLP-1 is the induction of IGF-1R and IRS-2 expression and activation of the **PI3K/Akt** signaling **pathway** by autocrine **secretion** of IGF-2 and its binding to the IGF-1R , , . Type 2 diabetes (T2DM) appears when **insulin secretion** is no longer sufficient to compensate for peripheral **insulin** resistance.

Cited by: 3

Author: David Vallois, Guy Niederhäuser, Mark I...

Publish Year: 2014

[ALL](#)[IMAGES](#)[VIDEOS](#)[MAPS](#)[NEWS](#)[SHOPPING](#)

53,000 Results

Any time ▾

Long-term exposure to genistein improves insulin secretory ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2720420>

Aug 15, 2009 · 2.3. **Insulin secretion** and content. Confluent INS-1E **cells** or islets were cultured in RPMI-1640 containing 5.5 mM glucose and 2% FBS at 37 °C and 5% CO₂ in the presence of various concentrations of genistein or vehicle for 48 h. In some experiments, **cells** were co-incubated with genistein and PKA or translation inhibitor.

Cited by: 62**Author:** Zhuo Fu, Dongmin Liu**Publish Year:** 2009

Role of Blood Vessels, Endothelial Cells, and Vascular ...

<https://academic.oup.com/edrv/article/31/3/343/2354761> ▾

Jun 01, 2010 · Finally, the **insulin-like growth factor-1** receptor, which is found at high **levels** in muscle **endothelial cells**, could also compensate for loss of the **insulin** receptor. Additionally, as mentioned in Section IV. E, eNOS knockout mice are also **insulin** resistant. No studies linking knockout of endothelin-1 to amelioration of **insulin** resistance ...

Cited by: 143**Author:** Oliver C. Richards, Summer M. Raines, ...**Publish Year:** 2010

Endothelial Dysfunction and Diabetes: Effects on ...

<https://www.hindawi.com/journals/ijvm/2012/918267> ▾

F. C. Sasso, D. Torella, O. Carbonara et al., "Increased **vascular endothelial growth factor** expression but impaired **vascular endothelial growth factor** receptor signaling in the myocardium of type 2 diabetic patients with chronic coronary heart disease," Journal of the American College of Cardiology, vol. 46, no. 5, pp. 827–834, 2005.

Cited by: 573**Author:** Gopi Krishna Kolluru, Shyamal C. Bir, C...**Publish Year:** 2012

AMP-Activated Protein Kinase in Metabolic Control and ...

<https://www.ahajournals.org/doi/10.1161/01.RES.0000256090.42690.05>

P-Activated protein kinase can induce apoptosis of **insulin**-producing **MIN6 cells** through stimulation of c-Jun-N-terminal kinase. J Mol Endocrinol. 2003; 30: 151–161. Crossref Medline Google Scholar; 98 Kefas BA, Heimberg H, Vaulont S, Meisse D, Hue L, Pipeleers D, Van De