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### Data Article

# Data on hypoxia-induced VEGF, leptin and NF- $\kappa$ B p65 expression



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### ABSTRACT

The data set presented here is associated with the article “Intracellular calcium and NF- $\kappa$ B regulate hypoxia-induced leptin, VEGF, IL-6 and adiponectin secretion in human adipocytes” (Al-Anazi et al., 2018). Data illustrate hypoxia-induced VEGF and leptin expression in human adipocytes treated with the calcium chelator BAPTA-AM (1  $\mu$ M). It also shows NF- $\kappa$ B p65 induced expression by hypoxia. Preadipocytes were differentiated for 14 days and then subjected to 0.5–1.5% oxygen in the presence and absence of BAPTA-AM or the NF- $\kappa$ B inhibitor SN50 for 48 h prior to RNA isolation and PCR analysis.

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## Specifications table

Subject area	Cell Biology
More specific subject area	Adipocyte Biology
Type of data	Figure
How data was acquired	Differentiation, RT-PCR using CFX96 real-time (RT)-PCR system (Bio-Rad, CA, USA).
Data format	Analyzed
Experimental factors	Cells were subjected to hypoxia for 48 h in the presence and absence of BAPTA-AM or inhibitor of NF- $\kappa$ B signaling pathway.
Experimental features	Cells were lysed and mRNA levels for leptin and VEGF measured
Data source location	Department of Cell Biology, King Faisal Specialist Hospital and Research Centre, Riyadh 11211, Saudi Arabia.
Data accessibility	Data are with this article
Related research article	Al-Anazi A, Parhar R, Saleh S, Al-Hijailan R, Inglis A, Al-Jufan M, Bazzi M, Hashmi S, Conca W, Collison K and Al-Mohanna F. Intracellular calcium and NF- $\kappa$ B regulate hypoxia-induced leptin, VEGF, IL-6 and adiponectin secretion in human adipocytes. 2018. <i>Life Sciences</i> .212:275–284 [1].

## Value of the data

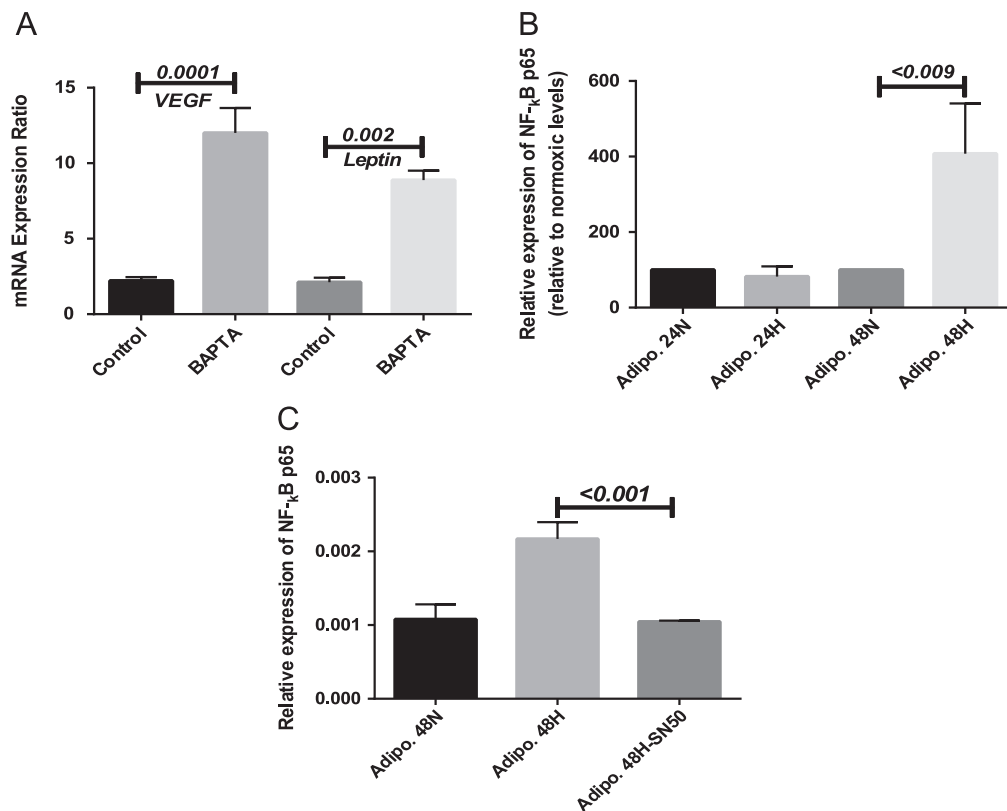
- The data can be used to show that lowering intracellular calcium concentrations selectively increase adipocyte expression of VEGF and leptin *in vitro*.
- NF- $\kappa$ B p65 expression is induced by hypoxia.
- Data can be used to show the inhibition of hypoxia-induced NF- $\kappa$ B p65 expression by SN50 in adipocytes.

## 1. Data

Expression of VEGF and leptin in the presence of BAPTA-AM under hypoxic conditions, the expression of NF- $\kappa$ B p65 under normoxic and hypoxic conditions and the inhibition of hypoxia-induced expression of NF- $\kappa$ B by SN50 (Fig. 1). For details, please see our full article [1].

## 2. Experimental design, materials, and methods

Human subcutaneous preadipocytes (HPAd) were grown in preadipocyte growth medium (PGM). Preadipocyte were treated with adipocyte differentiation medium (ADM) containing PGM supplemented with SingleQuots™ (containing insulin, dexamethasone, indomethacin, and isobutylmethylxanthine) for 14 days. Adipocyte differentiation was monitored by the appearance of lipid droplets (typically commencing on days 4–5 post initiation). Hypoxia was induced by adipocyte exposure to 0.5–1.0% oxygen in hypoxia chamber (Biospherix, Ltd, Parish, NY, USA) for 48 h. Parallel experiments with control cells were performed (under 21% oxygen). For calcium chelation, experiments were performed in the presence or absence of the calcium chelator (BAPTA-AM, 1  $\mu$ M) during exposure to hypoxia. NF- $\kappa$ B inhibition was achieved by treating the cells with the NF- $\kappa$ B inhibitor SN50 (20  $\mu$ M). Total cellular RNA and protein was extracted from the cells and stored for subsequent analysis.



**Fig. 1.** Hypoxia-induced (48 h) expression of VEGF and leptin is augmented by BAPTA-AM (1  $\mu$ M). Data are expressed as mean  $\pm$  SEM;  $n \geq 3$  performed in triplicate, and are representative of at least three independent experiments. mRNA is expressed relative to 18S ribosomal RNA. Sidak's corrected multiple comparison  $p$ -values are indicated on the black horizontal bars (A). (B) Hypoxia-induced NF- $\kappa$ B p65 expression relative to normoxic levels. (C) Inhibition of NF- $\kappa$ B p65 expression by SN50 (20  $\mu$ M). mRNA is expressed relative to 18S ribosomal RNA. Sidak's corrected multiple comparison  $p$ -values are indicated on the black horizontal bars. Data are mean  $\pm$  SEM  $n \geq 3$  performed in triplicate and are representative of at least three independent experiments.

## Acknowledgments

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## Transparency document. Supporting information

Transparency data associated with this article can be found in the online version at <https://doi.org/10.1016/j.dib.2018.10.147>.

## Reference

- [1] A. Al-Anazi, R. Parhar, S. Saleh, R. Al-Hijailan, A. Inglis, M. Al-Jufan, M. Bazzi, S. Hashmi, W. Conca, K. Collison, F. Al-Mohanna, Intracellular calcium and NF- $\kappa$ B regulate hypoxia-induced leptin, VEGF, IL-6 and adiponectin secretion in human adipocytes, *Life Sci.* 212 (2018) 275–284.