The farnesoid X receptor regulates adipocyte differentiation and function by promoting peroxisome proliferator-activated receptor-gamma and interfering with the Wnt/beta-catenin pathways.

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Abdelkarim M et al. Figure 1

A

Weight of BAT

B

Adipocyte fraction (%)

FXR\(^{+/+}\) - Control

FXR\(^{+/+}\) + RSG

FXR\(^{-/-}\) - Control

FXR\(^{-/-}\) + RSG

C

FXR\(^{+/+}\) + RSG

FXR\(^{-/-}\) + RSG

250 µm

250 µm
Abdelkarim M et al. Figure 5

**A**

| mRNA/Cyclophilin | FXR+/+ | FXR-/- | Days of differentiation |
|------------------|--------|--------|-------------------------|
| C/EBPβ           | ![Graph](image) |
| C/EBPα           | ![Graph](image) |
| PPARγ            | ![Graph](image) |
| aP2              | ![Graph](image) |

**B**

- **FXR+/+**
  - Day 0
  - Day 8

- **FXR-/-**
  - Day 0
  - Day 8

**C**

| mRNA/Cyclophilin | FXR+/+ | FXR-/- | Days of differentiation |
|------------------|--------|--------|-------------------------|
| PERILIPIN        | ![Graph](image) |
| ADRP             | ![Graph](image) |
| S3-12            | ![Graph](image) |
| FSP27            | ![Graph](image) |

Days of differentiation:
Figure 7

**A**

**β-catenin**

![Bar graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**B**

**sFRP1**

![Line graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**sFRP5**

![Line graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**C**

**β-catenin protein**

![Western blot showing β-catenin expression levels for FXR^+/+^ and FXR^−/−^.](image)

**D**

**LRP5**

![Bar graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**c-Myc**

![Bar graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**Axin2**

![Bar graph showing mRNA/Cyclophilin levels for FXR^+/+^ and FXR^−/−^ during different days of differentiation.](image)

**E**

![Western blot showing expression levels for empty retrovirus and FXR retrovirus.](image)
Abdelkarim M et al.. Figure 8

A

\[ \beta - \text{catenin} \]

\[ \text{c.lacid red} \]

\begin{align*}
\text{FXR} &: +/+, -/-, +/+, -/-, -/-, -/-, -/+, -/-, +/+, -/-, +/+
\end{align*}

\begin{align*}
\text{sFRP1} &: -, -/-, -/-, +, -/-, -/-, +
\end{align*}

\text{D0, D4}

\text{Days of differentiation}

B

\begin{align*}
\text{PPAR}\,\gamma &: 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4
\end{align*}

\begin{align*}
\text{aP2} &: 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4
\end{align*}

\begin{align*}
\text{FXR} &: +/+, -/-, +/+, -/-, +/+, -/-, -/-, -/-, -/-, -/-, -/-, -/+, -/-, +/+, -/-, +/+
\end{align*}

\begin{align*}
\text{sFRP1} &: -, -/-, -/-, +, -/-, -/-, +
\end{align*}