SUPPLEMENTAL MATERIALS

Title: Scavenger receptor BI, not LDL receptor, mediates adrenal stress response

Authors: Misa Ito, MD[1,2], Xiang Ye, PhD[1], Qian Wang[1], Ling Guo, MD[1], Dan Hao[1,2], Deborah A. Howatt[1], Lei Cai, PhD[1], Ryan Temel, PhD[1,3], Alan Daugherty, PhD, DSc[1,,2,3] and Xiang-An Li, PhD[1,2,3,*]

Affiliations: [1]Saha Cardiovascular Research Center, [2]Department of Pharmacology and Nutritional Sciences, [3]Department of Physiology, University of Kentucky College of Medicine, Lexington, KY 40536

Running title: HDL/SR-BI mediates adrenal stress response

*Corresponding author: Xiang-An Li, PhD, Saha Cardiovascular Center, University of Kentucky College of Medicine, BBSRB B255, 741 S Limestone, Lexington, KY 40536. Tel: 859-257-5113. Email: xli2@email.uky.edu

Major Resources Table

In order to allow validation and replication of experiments, all essential research materials listed in the Methods should be included in the Major Resources Table below. Authors are encouraged to use public repositories for protocols, data, code, and other materials and provide persistent identifiers and/or links to repositories when available. Authors may add or delete rows as needed.

Animals (in vivo studies)

Species	Vendor or Source	Background Strain	Sex	Persistent ID / URL
SR-BI$^{+/-}$ (B6;129S-Scarb1tm1Kri/J)	The Jackson Laboratory	129S2/SvPas	Male and female	https://www.jax.org/strain/003379 Stock No:003379 |SR-BI KO
ApoB100	Taconic Biosciences	C57BL/6NTac	Male and female	https://www.taconic.com/transgenic-mouse-model/apob100 Model # 1004

Genetically Modified Animals

SR-BI$^{-/-}$	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male	SR-BI$^{+/-}$ (B6;129S-Scarb1tm1Kri/J)	The Jackson Laboratory	129S2/SvPas		https://www.jax.org/strain/003379 Stock No:003379 |SR-BI KO
Parent - Female	SR-BI$^{+/-}$ (B6;129S-Scarb1tm1Kri/J)	The Jackson Laboratory	129S2/SvPas		https://www.jax.org/strain/003379 Stock No:003379 |SR-BI KO

SRBI$^{-/-}$ ApoBtg	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male	SRBI-/-	The Jackson Laboratory	129S2/SvPas		https://www.jax.org/strain/003379
Parent - Female	ApoB100	Taconic Biosciences	C57BL/6NTac		https://www.taconic.com/transgenic-mouse-model/apob100 Model # 1004

Caculation of LDL AUC

LDL_ratio

```r
# fraction numbers
x <- c(6:31)

# control FPLC
y1 <- c(1.3615, 1.5565,1.218,0.8905,0.6445,0.3585,0.0645,0.171,0.984,0.8025,1.492,3.9,9.955,15.414,19.7
# LDL high mice
y2 <- c(0.3185,0.612,0.3895,0.5325,0.6225,0.572,1.948,3.257,6.176,7.9435,8.616,8.0365,8.9925,10.9915,13
```

```
## Loading required package: xts

## Loading required package: zoo

##
## Attaching package: 'zoo'

## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric

## Registered S3 method overwritten by 'xts':
##   method     from
##   as.zoo.xts zoo

## Loading required package: TTR

## Registered S3 method overwritten by 'quantmod':
##   method         from
##   as.zoo.data.frame zoo

## Version 0.4-0 included new data defaults. See ?getSymbols.

## Loading required package: ALS

## Loading required package: nnls

## Loading required package: Iso

## Iso 0.0-18

## Loading required package: ptw

##      rt        sd FWHM  height      area
## [1,]  3 1.273983    3  1.2180   3.889562
## [2,] 10 7.219235   17  0.8025  14.521991
## [3,] 16 2.123305    5 18.8785 100.477703

##      rt         sd FWHM  height      area
## [1,]  3 10.616523   25  0.3895  10.36525
## [2,]  6 10.616523   25  0.5720  15.22188
## [3,] 12  4.671270   11  8.0365  94.10048
## [4,] 17  3.821948    9 14.1130 135.20541
```

```r
LDL_ratio <- fit2[3, 5]/fit1[2, 5]
HDL_ratio <- fit2[4, 5]/fit1[3, 5]

LDL_ratio
```

```
##      area
```

Caculation of LDL AUC

```r
# fraction numbers
x <- c(6:31)

# SRBI+/+ApoBwt
y1 <- c(0,0.206,0.251,0.096,0,0.206,0.206,0.008,0,0,0,0,0,0.008,0.273,0.538,1.178,2.304,1.928,0.825,0.5
# SRBI+/+ApoBtg
y2 <- c(0,0,0,0,0.21,0.33,0.21,0,0.067,0.833,2.269,3.179,2.581,1.862,1.168,0.833,1.36,2.485,2.126,0.857

# SRBI-/-ApoBwt
y3 <- c(1.473,1.553,1.315,0.788,0.735,0.498,0,0,0,0,0.419,2.502,9.173,15.606,20.432,18.823,15.606,11.09

# SRBI-/-ApoBtg
y4 <- c(0.366,1.263,0.946,1.078,1.052,1.157,2.027,2.634,5.534,7.986,9.357,8.223,8.434,9.519,12.68,13.89
```

```
## Loading required package: xts

## Loading required package: zoo

##
## Attaching package: 'zoo'

## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric

## Loading required package: TTR

## Registered S3 method overwritten by 'quantmod':
##   method             from
##   as.zoo.data.frame zoo

## Version 0.4-0 included new data defaults. See ?getSymbols.

## Loading required package: ALS

## Loading required package: nnls

## Loading required package: Iso

## Iso 0.0-18

## Loading required package: ptw

##     rt         sd FWHM height     area
## [1,] NA         NA   NA    NA       NA
## [2,] 19 0.8493218    2  1.928 4.104585

##     rt         sd FWHM height    area
## [1,] 13 0.8493218    2  2.581 5.494779
## [2,] 19 0.8493218    2  2.126 4.526114
```

fit3

```
##     rt         sd FWHM height     area
```

Suppl Fig. 1
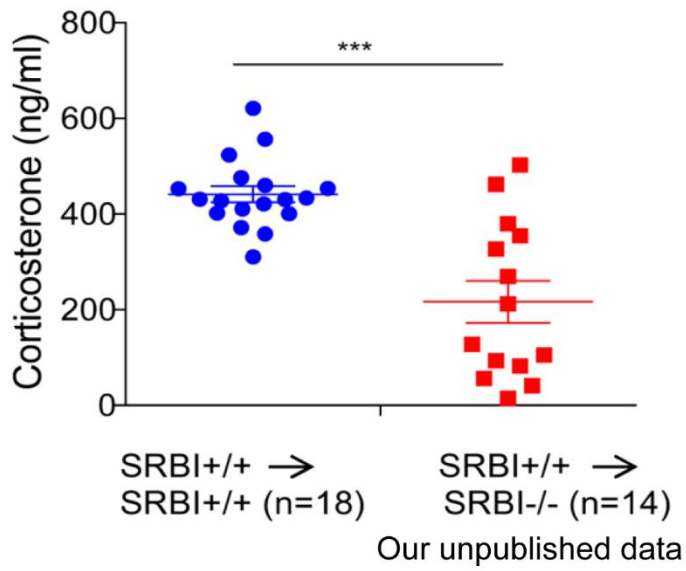
Suppl Fig 1. Adult recipient SRBI+/+ or SR-BI-/- mice were bilaterally adrenalectomized and adrenal gland from 9-day old SRBI+/+ mice was transplanted to the recipient mice. 6 weeks later, the mice were treated with cecal ligation and puncture (CLP) and the plasma corticosterone concentrations were quantified 4h post CLP.