



### Supplemental Figure 1

Preabsorption of antisera with control peptide.

(a) Confocal fluorescent image of ILIRI-ir at 25x. (b) Confocal image of ILIRI-ir preabsorbed with control peptide (c) Confocal fluorescent image of αMSH-ir at 25x. (d) Confocal image of αMSH-ir preabsorbed with control peptide (e) Confocal fluorescent image of αMSH-ir at 25x (f) Confocal image of AgRP-ir preabsorbed with control peptide

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Hypothalamic mRNA expression by RT-PCR in G130 fetuses

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	<b>mCTR</b>	<b>mHFD</b>	<i>p</i> value
BDNF	1.90 ± 0.35	4.27 ± 1.13	0.10
CART	0.22 ± 0.05	0.32 ± 0.07	0.33
GLUT1	0.98 ± 0.31	1.45 ± 0.11	0.13
IGF1R	0.99 ± 0.09	1.04 ± 0.03	0.20
INSR	1.11 ± 0.13	1.90 ± 0.33	0.08
IRS1	0.48 ± 0.12	0.42 ± 0.05	0.60
IRS2	1.19 ± 0.08	1.51 ± 0.11	0.22
LEPR	1.54 ± 0.40	1.48 ± 0.16	0.86
MOR	0.58 ± 0.08	0.90 ± 0.22	0.24
NPY1R	0.21 ± 0.021	0.19 ± 0.034	0.67
SOCS3	0.65 ± 0.09	1.14 ± 0.30	0.25
UCP2	0.84 ± 0.11	1.23 ± 0.14	0.07
VEGF	3.27 ± 0.19	5.37 ± 1.16	0.13

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Supplemental Table 1. Hypothalamic mRNA expression by RT-PCR in G130 fetuses. Values are mean +/- SEM (n=4-7).

Target	Alternate	mCTR	mDR	<i>p value</i>
C5a		11.91 ± 1.30	12.86 ± 2.130	0.71
CD40 Ligand	CD154	10.24 ± 1.08	12.75 ± 1.45	0.21
G-CSF	CSFβ	10.21 ± 0.78	11.87 ± 1.21	0.3
GM-CSF	CSFα	9.47 ± 0.50	11.53 ± 1.07	0.13
GROα	CXCL1	12.03 ± 0.83	13.92 ± 1.99	0.42
I-309	CCL1	9.43 ± 0.70	11.57 ± 1.44	0.23
IFNγ		9.12 ± 0.75	12.13 ± 2.03	0.21
IL-1α	IL-1F1	9.70 ± 1.76	11.27 ± 2.05	0.57
IL-1β	IL-1F2	10.14 ± 1.64	12.02 ± 1.46	0.43
IL-1ra	IL-1F3	14.59 ± 0.82	13.50 ± 1.08	0.45
IL-2		9.10 ± 0.44	10.95 ± 1.11	0.17
IL-4		9.04 ± 0.70	10.93 ± 1.26	0.24
IL-5		8.41 ± 0.69	10.70 ± 1.39	0.19
IL-6		8.85 ± 0.59	10.89 ± 1.78	0.32
IL-8	CXCL8	15.81 ± 3.49	13.20 ± 2.77	0.58
IL-10		9.61 ± 1.53	9.611 ± 1.53	0.51
IL-12 p70		9.37 ± 1.04	12.14 ± 1.40	0.16
IL-13		12.72 ± 0.89	14.63 ± 1.04	0.21
IL-16	LCF	9.46 ± 0.49	11.78 ± 1.21	0.13
IL-17		9.15 ± 0.56	11.35 ± 1.19	0.14
IL-17E		9.04 ± 0.57	11.04 ± 1.24	0.19
IL-23		9.14 ± 0.58	11.58 ± 1.68	0.22
IL-27		9.86 ± 1.04	11.59 ± 2.33	0.52
IL-32α		10.49 ± 1.75	11.92 ± 1.50	0.56
IP-10	CXCL10	9.43 ± 0.96	12.43 ± 1.35	0.12
I-TAC	CXCL11	10.61 ± 0.19	11.93 ± 1.13	0.29
MCP-1	CCL2	9.16 ± 0.71	11.67 ± 1.03	0.09
MIF	GIF	57.50 ± 3.97	59.25 ± 7.79	0.85
MIP-1α	CCL3	9.34 ± 0.75	11.40 ± 0.92	0.13
MIP-1β	CCL4	8.78 ± 0.61	11.26 ± 1.70	0.22
RANTES	CCL5	51.84 ± 17.34	54.19 ± 16.12	0.92
SDF-1	CXCL12	10.53 ± 1.27	13.18 ± 1.81	0.28
Serpin E1	PAI-1	39.02 ± 9.99	28.21 ± 4.72	0.37
sICAM-1	CD54	8.74 ± 0.69	11.25 ± 1.68	0.22
sTREM-1		8.96 ± 0.65	11.40 ± 1.06	0.1
TNFα	TNFSF1A	9.49 ± 0.71	11.79 ± 1.11	0.13

Supplemental Table 2. Circulating cytokines in G130 mDR compared to mCTR. The fold-change for each gene was calculated as  $2^{(-Ct)}$ , where  $Ct = Ct(\text{mHFD group}) - Ct(\text{mCTR group})$ . (n=4).