

SUPPLEMENTARY DATA

Supplementary Table 1. Gene expression analysis of unstimulated and LPS-stimulated (100ng/ml for 4hr) control and LysM PTP1B BMDMs.

Gene	Treatment	Control	LysM PTP1B	P value
		Mean \pm sem	Mean \pm sem	
IL-12	Unstimulated	1 \pm 0.39	1.13 \pm 0.07	0.75
	4hr LPS	750931 \pm 344883	484493 \pm 215365	0.54
IL-6	Unstimulated	1 \pm 0.47	0.02 \pm 0.002	0.08
	4hr LPS	25927 \pm 8029	29967 \pm 10838	0.77
IL-1 β	Unstimulated	1 \pm 0.27	30.17 \pm 29.31	0.35
	4hr LPS	3565223 \pm 11968998	4182115 \pm 1849572	0.83
MCP1	Unstimulated	1 \pm 0.91	0.76 \pm 0.44	0.82
	4hr LPS	49.42 \pm 24.68	86.39 \pm 41.77	0.48
Arginase	Unstimulated	1 \pm 0.18	0.91 \pm 0.06	0.66
	4hr LPS	0.6 \pm 0.31	0.79 \pm 0.26	0.65
CCL17	Unstimulated	1 \pm 1	4.61 \pm 1.58	0.1
	4hr LPS	1507.48 \pm 702.23	2545.28 \pm 578.68	0.3
CCL22	Unstimulated	1 \pm 0.16	0.97 \pm 0.15	0.9
	4hr LPS	1147.15 \pm 489.19	2153.93 \pm 792.78	0.32
SOCS3	Unstimulated	1 \pm 0.18	0.91 \pm 0.06	0.66
	4hr LPS	79.36 \pm 26.67	190.24 \pm 94.37	0.3
IL-4RA	Unstimulated	1 \pm 0.16	1.24 \pm 0.24	0.44
	4hr LPS	1.04 \pm 0.27	1.74 \pm 0.60	0.33
BCL3	Unstimulated	1 \pm 0.54	1 \pm 0.39	1
	4hr LPS	7.62 \pm 1.46	9.69 \pm 2.84	0.54
BCL2	Unstimulated	1 \pm 0.73	0.71 \pm 0.29	0.72
	4hr LPS	14.22 \pm 4.58	43.55 \pm 25.67	0.3
IKAROS	Unstimulated	1 \pm 0.76	0.67 \pm 0.29	0.70
	4hr LPS	16.42 \pm 5.57	55.48 \pm 34.50	0.31

LysM PTP1B mice (n = 4) versus control mice (n = 4). mRNA expression levels calculated relative to reference genes (β -actin, YWhaz and NoNo). Data expressed as mean \pm S.E.M. Significance value taken as $P \leq 0.05$ from two-tailed Student's T-test.

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Supplementary Table 2. Flow cytometry data showing percentage spleen cells expressing specific cell markers and corrected for absolute cell numbers.

Marker	% cells expressing marker			Absolute cell no. expressing marker ($\times 10^7$)		
	Control	LysM PTP1B	Significance level	Control	LysM PTP1B	Significance level
CD3 ⁺	28.3 ± 2.2	24.6 ± 1.2	P = 0.3	2.2 ± 0.3	4.2 ± 0.4	**
B220 ⁺	54.3 ± 4.2	54.5 ± 3.9	P = 1	4.5 ± 0.3	9.3 ± 0.7	****
CD11b ⁺	6.4 ± 1.0	7.8 ± 2.3	P = 0.5	0.5 ± 0.1	1.4 ± 0.4	*
CD11c ⁺	5.18 ± 0.75	5.60 ± 0.43	P = 0.7	0.5 ± 0.1	1.0 ± 0.2	**
F4/80 ⁺	12.5 ± 1.2	16.9 ± 1.6	P = 0.06	1.1 ± 0.2	2.9 ± 0.4	***
MHCII ⁺	65.0 ± 4.6	66.4 ± 4.3	P = 0.9	5.5 ± 0.54	11.3 ± 0.70	****
Gr1 ⁺	See <i>fig 5M</i>			0.4 ± 0.1	1.3 ± 0.7	**

Flow cytometry was carried out on spleen cells isolated from HFD-fed LysM PTP1B mice (n = 4) and control mice (n = 8). Values on the left side depict the percentage of cells expressing each marker and right side shows total number of cells expressing each marker. Data expressed as mean ± S.E.M. Significance value taken as P ≤ 0.05 (*), P ≤ 0.01 (**), P ≤ 0.001 (***), P ≤ 0.0001 (****) from two-tailed Student's T-test.

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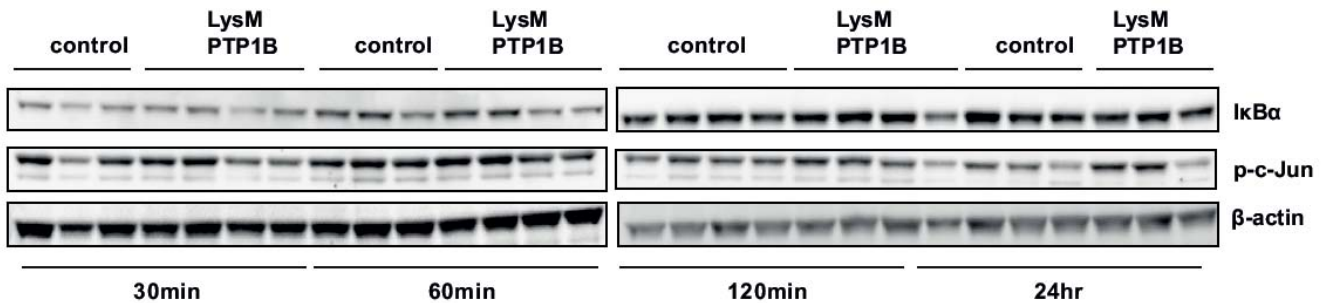
Primer sequences

Arginase F	CAGAAGAATGGAAGAGTCAG
Arginase R	CAGATATGCAGGGAGTCACC
BCL2 F	GGATGACTTCTCTCGTCGTCGCTAC
BCL2 R	TGACATCTCCCTGTTGACGCT
BCL3 F	CCGGAGGCCCTTTACTACCA
BCL3R	GGAGTAGGGGTGAGTAGGCAG
β -actin F	GGGGTGTGGAAGGTCTCAA
β -actin R	GATCTGGCACCACACACCTTTCT
CCL17 F	AGTGCTGCCTGGATTACTTCAAAG
CCL17 R	CTGGACAGTCAGAAACACGATGG
CCL22 F	TAACATCATGGCTACCCTGCG
CCL22 R	TGTCTTCCACATTGGCACCA
CD68 F	TGTCTGATCTTGCTAGGACCG
CD68 R	GAGAGTAACGGCCTTTTTGTGA
F4/80 F	CCCAGCTTATGCCACCTGCA
F4/80 R	TCCAGGCCCTGGAACATTGG
FAS F	GGAGGTGGTGATAGCCGGTAT
FAS R	TGGGTAATCCATAGAGCCCAG
G6Pase F	ATGAACATTCTCCATGACTTTGGG
G6Pase R	GACAGGGAAGTCTTTATTATAGG
IKAROS F	AGACAAGTGCCTGTCAGACAT
IKAROS R	CCAGGTAGTTGATGGCATTGTTG
IL1 beta F	GCAACTGTTCCCTGAACTCAACT
IL1 beta R	ATCTTTTGGGGTCCGTCAACT
IL4RA F	TCTGCATCCCGTTGTTTTGC
IL4RA R	GCACCTGTGCATCCTGAATG
IL6 F	TAGTCCTTCCTACCCCAATTTCC
IL6 R	TTGGTCCTTAGCCACTCCTTC
IL10 F	GCTCTTACTGACTGGCATGAG
IL10 R	CGCAGCTCTAGGAGCATGTG
IL12 F	GGAAGCACGGCAGCAGAATA
IL12 R	AACTTGAGGGAGAAGTAGGAATGG

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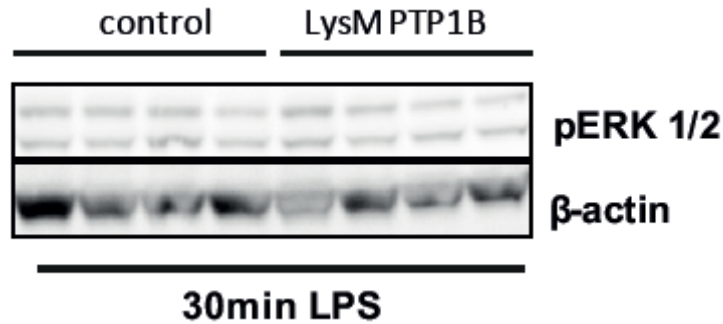
iNOS F	GGAGTGACGGCAAACATGACT
iNOS R	TAGCCAGCGTACCGGATGA
MCP-1 F	TTAAAAACCTGGATCGGAACCAA
MCP-1 R	GCATTAGCTTCAGATTTACGGGT
TNF-alpha F	CCCTCACACTCAGATCATCTTCT
TNF-alpha R	GCTACGACGTGGGCTACAG
NoNo F	GCCAGAATGAAGGCTTGACTAT
NoNo R	TATCAGGGGGAAGATTGCCCA
PEPCK F	GAGATAGCGGCACAAT
PEPCK R	TTCAGAGACTATGCGGTG
SOCS3 F	ACCAGCGCCACTTCTTCACA
SOCS3 R	GTGGAGCATCATACTGGTCC
STAT3 F	CAATACCATTGACCTGCCGAT
STAT3 R	GAGCGACTCAAACCTGCCCT
YWhaz F	GAAAAGTTCTTGATCCCCAATGC
YWhaz R	TGTGACTGGTCCACAATTCCTT

Supplementary Figure 1. Immunoblot depicting level of I κ B α and phosphorylated c-Jun following LPS stimulation (100 ng/ml LPS for 30, 60, 120 min and 24 hr) of LysM-PTP1B (n = 3 or 4) and control (n = 3 or 4) isolated BMDMs.

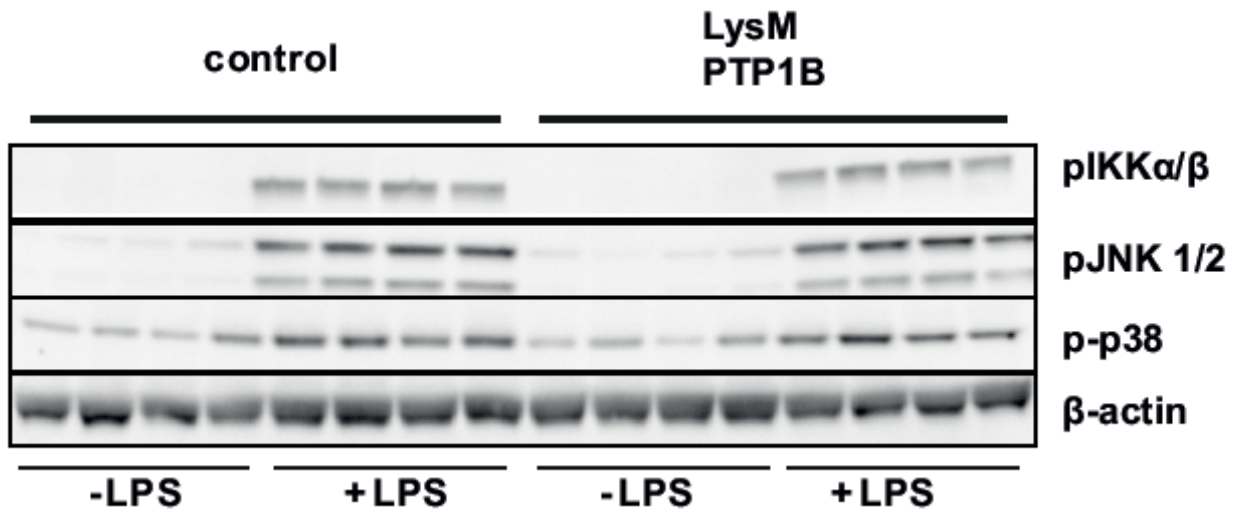


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Supplementary Figure 2. Immunoblot depicting levels of phosphorylated ERK 1/2 following LPS stimulation (100 ng/ml LPS for 30 min) of LysM-PTP1B (n = 4) and control (n = 4) isolated BMDMs.

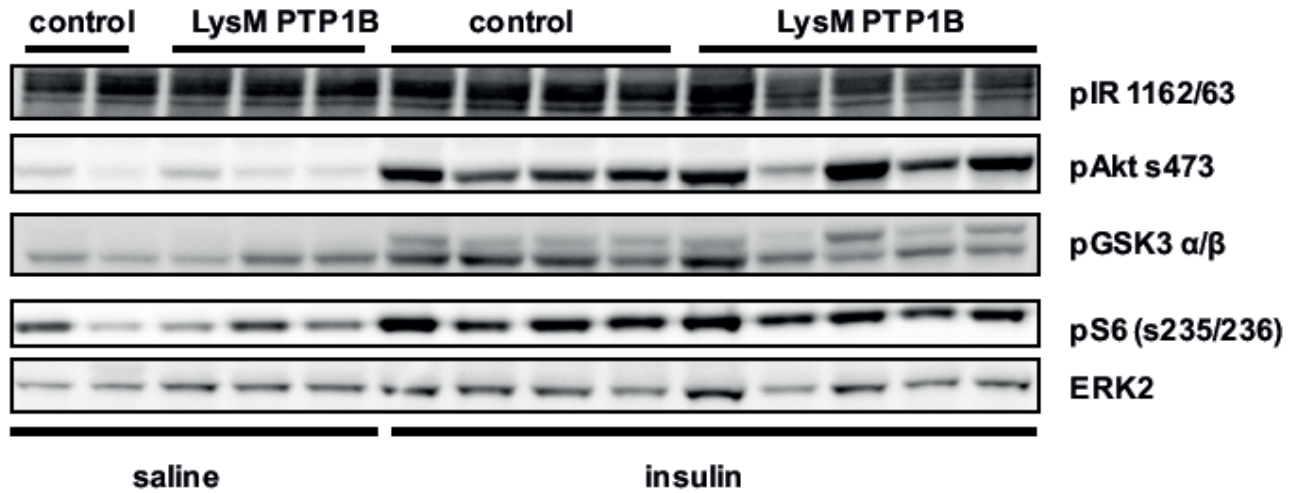


Supplementary Figure 3. Immunoblot depicting levels of phosphorylated IKKα/β, JNK 1/2, and p38 following LPS stimulation (100 ng/ml LPS for 30 min) of LysM-PTP1B (n = 4) and control (n = 4) isolated BMDMs.

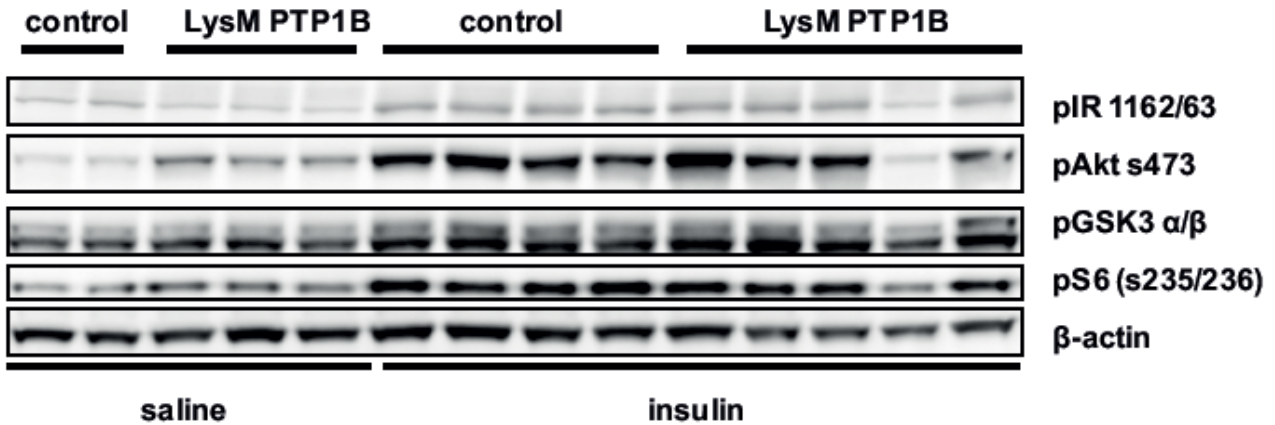


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Supplementary Figure 4. Liver insulin signaling immunoblot for saline (control, n = 2; LysM-PTP1B, n = 3) and insulin (control, n = 4; LysM-PTP1B, n = 5) injected mice.



Supplementary Figure 5. WAT insulin signaling immunoblot for saline (control, n = 2; LysM-PTP1B, n = 3) and insulin (control, n = 4; LysM-PTP1B, n = 5) injected mice.



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Supplementary Figure 6. Immunohistochemical staining of adipose tissue from HF-fed control (n=4) and LysM-PTP1B (n=4) with iNOS antibody.

