Supplementary Information

Transcription regulator TRIP-Br2 mediates ER stress-induced brown adipocytes dysfunction

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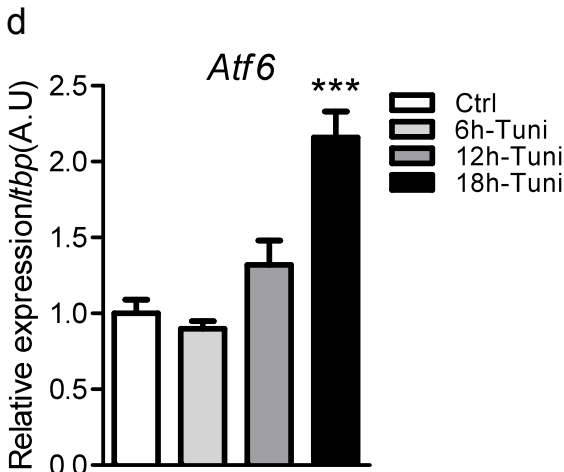
Supplementary Figure Legends

Supplementary Figure S1

qPCR analysis of ER stress markers (a) *Xbp1s* (b) *Creb3*, (c) *Atf4* and (d) *Atf6* gene expression in brown adipose tissues harvested from mice 6, 12 or 18 h after intraperitoneal (IP) injection with vehicle or tunicamycin (2.5 mg/kg)(n=5). All qPCR data are normalized with TBP and presented as mean ± SEM. *,$p<0.05$; **,$p<0.01$; ***,$p<0.001$ (vs Ctrl).
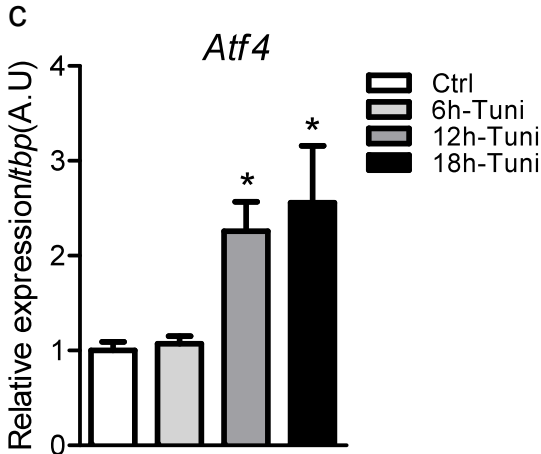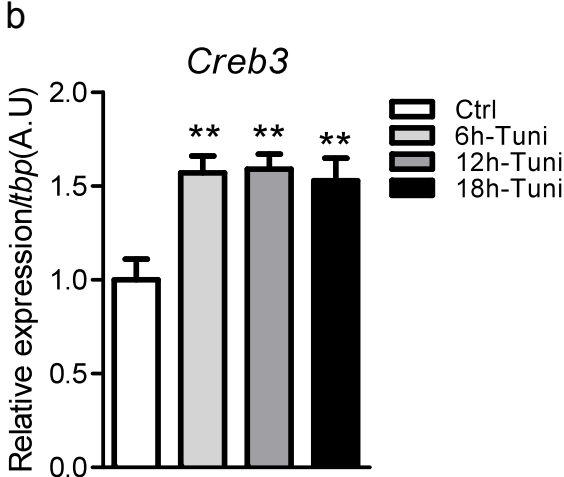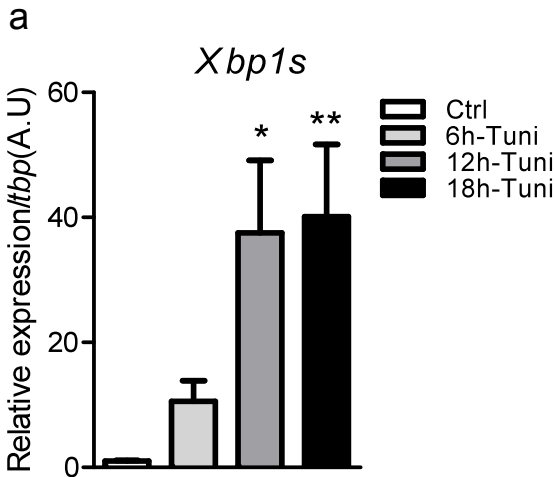
Supplementary Figure S2

qPCR analysis of ER stress markers (a) *Xbp1s* (b) *Creb3*, (c) *Atf4* and (d) *Atf6* gene expression in brown adipose tissues harvested from mice after 12 wk of CD, HFD, or HFD with TUDCA (250 mg/kg at 8am and 8pm, i.p., total 500 mg/kg for 15 days) (n=5). All qPCR data are normalized with TBP and presented as mean ± SEM. *,$p<0.05$; **,$p<0.01$; ***,$p<0.001$ (vs CD); [#],$p<0.05$; [###],$p<0.001$ (vs HFD).
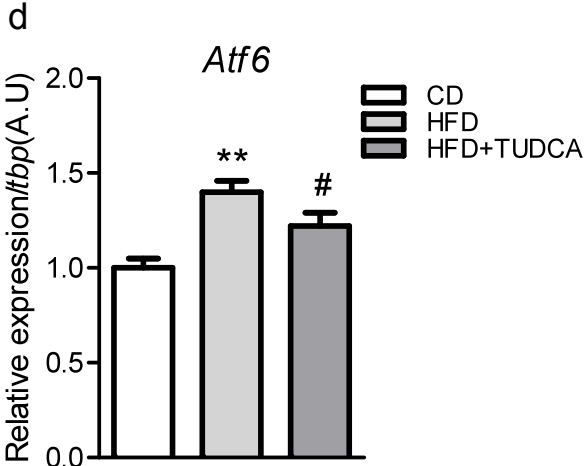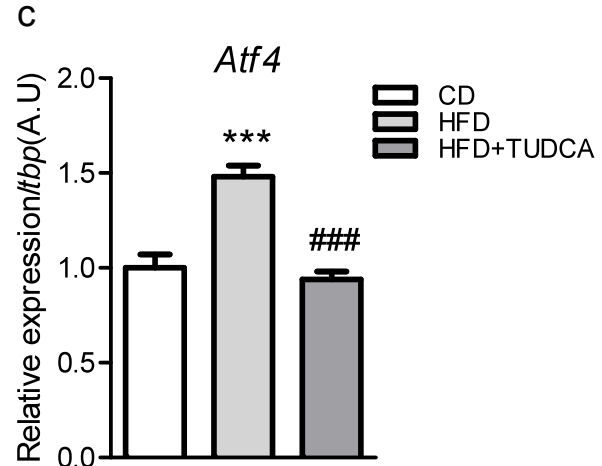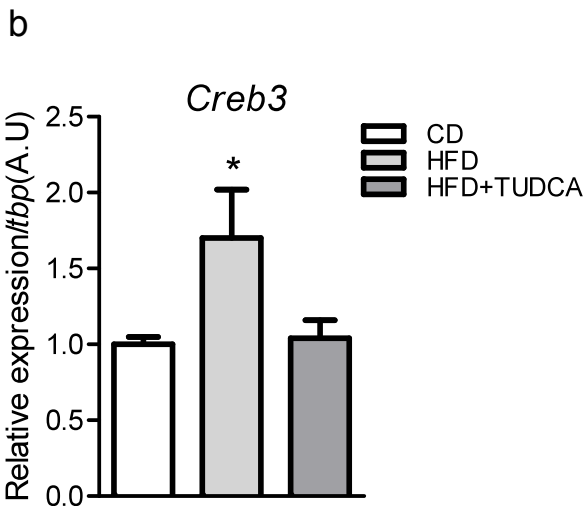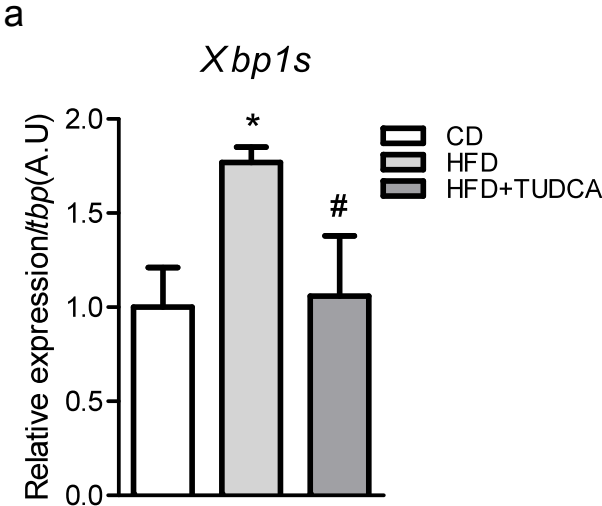
Supplementary Table 1

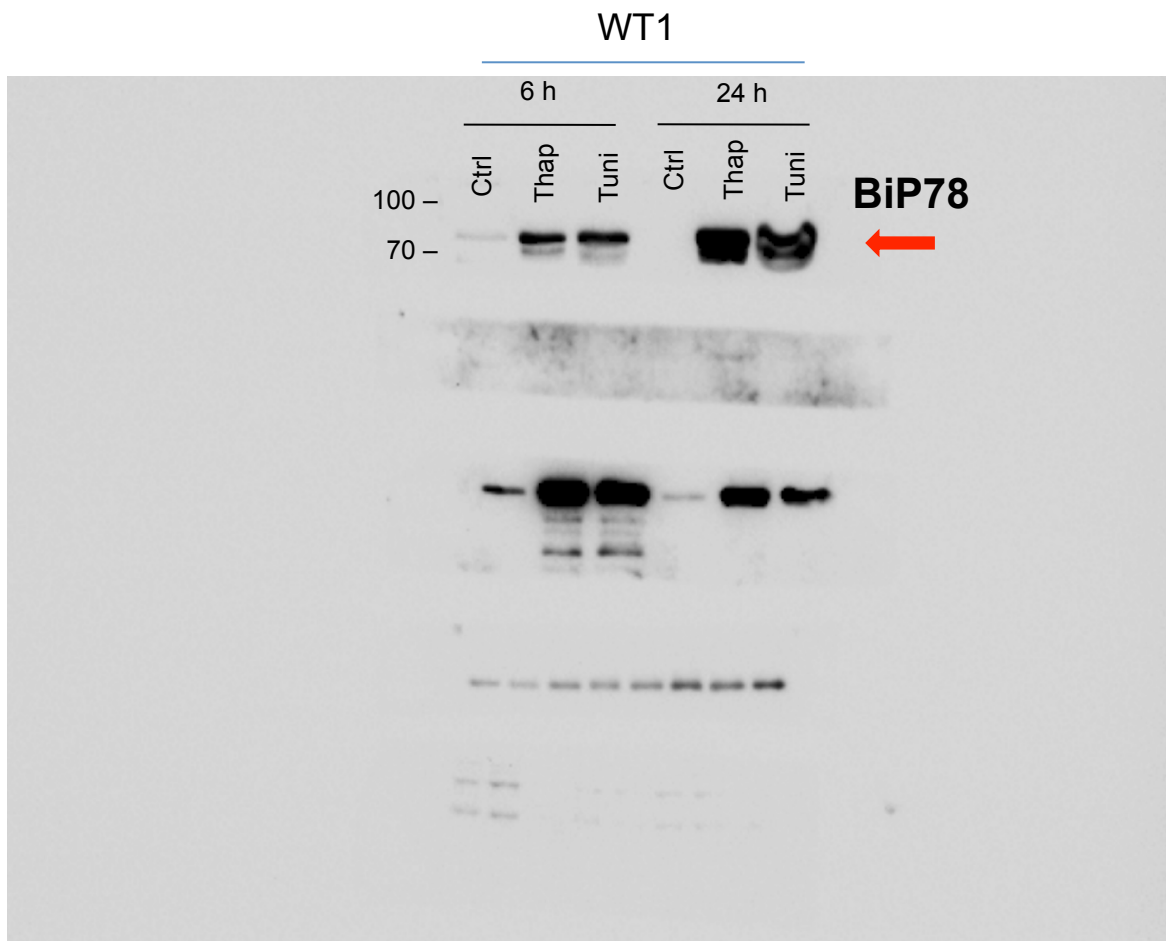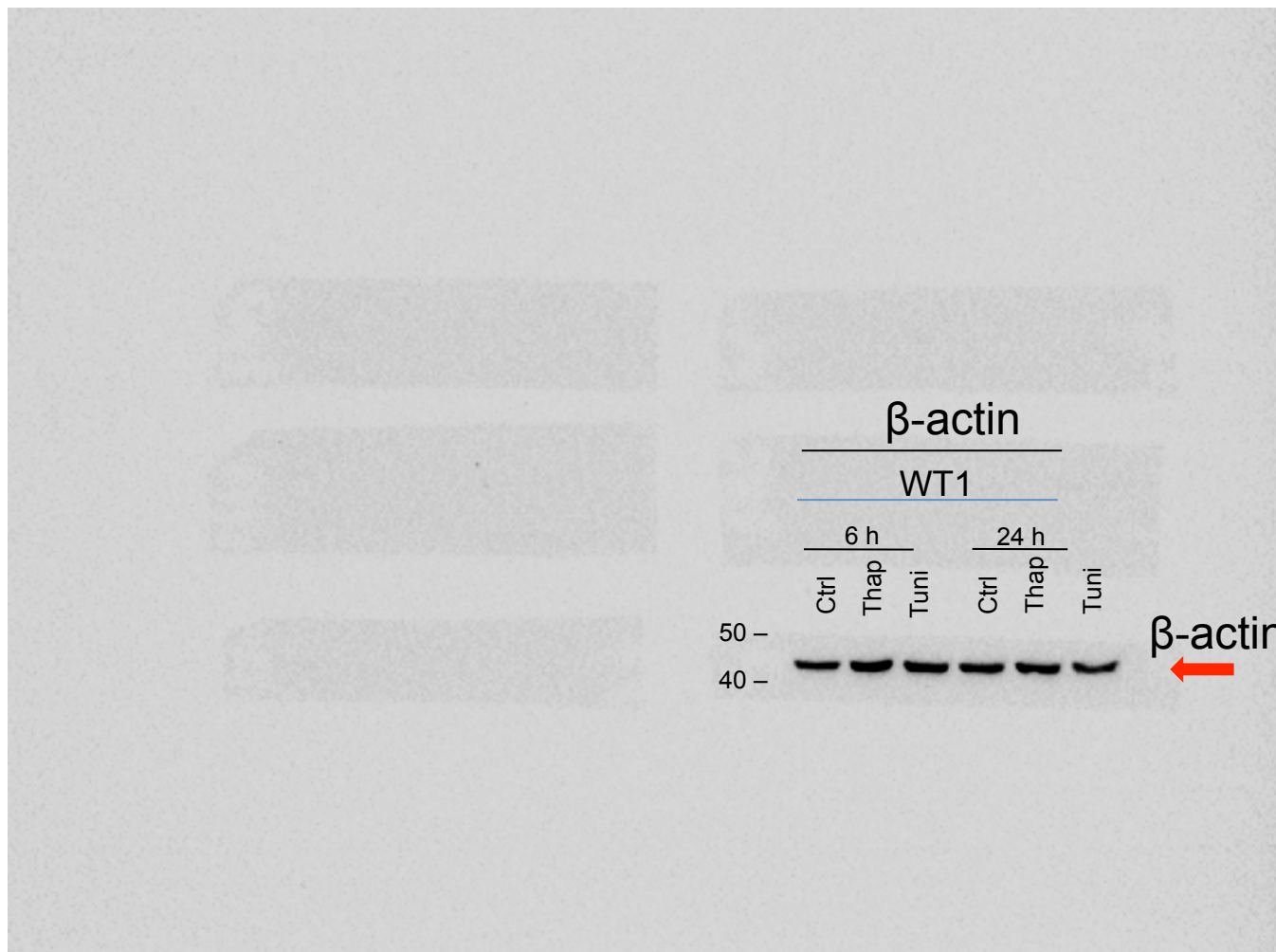| Primer sequences used in this study		
Gene		***Primer sequence***
mTrip-br2	Forward: 5'-	ATA TAT GTT GGG TAA AGG AGG AA -3'
	Reverse: 5'-	TGG CGC TGT AAG GTG TAA GAC -3'
mBip	Forward: 5'-	TTC AGC CAA TTA TCA GCA AAC TCT -3'
	Reverse: 5'-	TTT TCT GAT GTA TCC TCT TCA CCA GT -3'
mChop	Forward: 5'-	CCA CCA CAC CTG AAA GCA GAA -3'
	Reverse: 5'-	AGG TGA AAG GCA GGG ACT CA -3'
mTbp	Forward: 5'-	ACC CTT CAC CAA TGA CTC CTA TG -3'
	Reverse: 5'-	ATG ATG ACT GCA GCA AAT CGC -3'
mAtgl	Forward: 5'-	TAGCTAACAGTTGGGCTTCAC
	Reverse: 5'-	CAGAGAGAACAGAGCAGCTTAC
mHsl	Forward: 5'-	ACGGATACCGTAGTTTGGTGC
	Reverse: 5'-	TCCAGAAGTGCACATCCAGGT
mUcp1	Forward: 5'-	CTGCCAGGACAGTACCCAAG
	Reverse: 5'-	TCAGCTGTTCAAAGCACACA
mAdrb3	Forward: 5'-	GCTCTGTGTCTCTGGTTAGTTT
	Reverse: 5'-	GTCCAAGATGGTGCTTAGAGAG
mAox	Forward: 5'-	TCCTTAAACACCCACCCACCAAGA
	Reverse: 5'-	AAGAAAGGGAAGGTCAGCCACCAT
mCytc	Forward: 5'-	GCTACCCATGGTCTCATCGT
	Reverse: 5'-	CATCATCATTAGGGCCATCC
mCox8b	Forward: 5'-	GAACCATGAAGCCAACGACT
	Reverse: 5'-	GCGAAGTTCACAGTGGTTCC
mNdufs1	Forward: 5'-	CTTCAGGGAGGCATTCATTCT
	Reverse: 5'-	ATTGCTGCTCCATCATCTCTC
mSdhb	Forward: 5'-	CTGCCACACCATCATGAACT
	Reverse: 5'-	CTTGTAGGTCGCCATCATCTTC
mUqcrc1	Forward: 5'-	CAGATCGAGAAGGAACGAGATG
	Reverse: 5'-	GTCGCATGCAGGTAATCAAAG
mAtp5j	Forward: 5'-	CTCTTCGTGGACAAGATAAGAGAG
	Reverse: 5'-	CTCTGTCCAGATCTTGCTGATAC

Supplementary Figure S1

Suplementary Figure S2
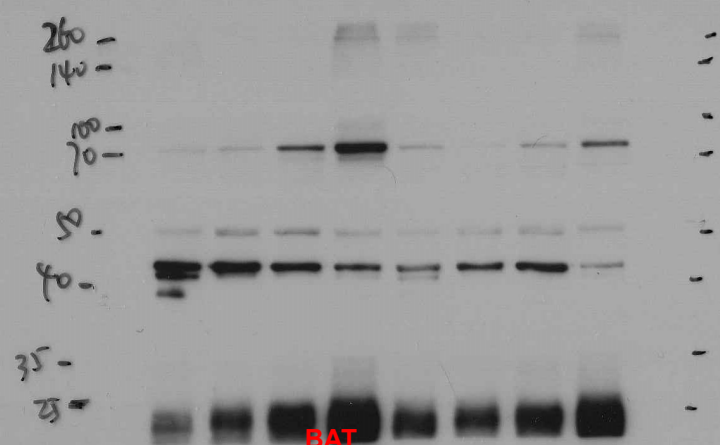
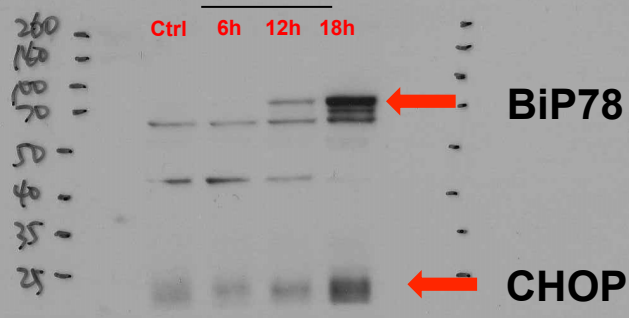Uncut blot for Figure 2d

Uncut blot for Figure 2d

WT1

6 h   24 h

Ctrl   Thap   Tuni   Ctrl   Thap   Tuni

35 –

25 –

CHOP

Uncut blot for Figure 2d

β-actin

WT1

6 h | 24 h

Ctrl | Thap | Tuni | Ctrl | Thap | Tuni

50 –
40 –

β-actin

5/9/2014

BAT

Tuni

Ctrl   6h   12h   18h

BiP78

CHOP
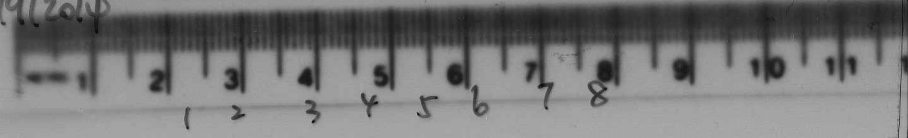
Uncut blot for Figure 3d

Uncut blot for Figure 3d
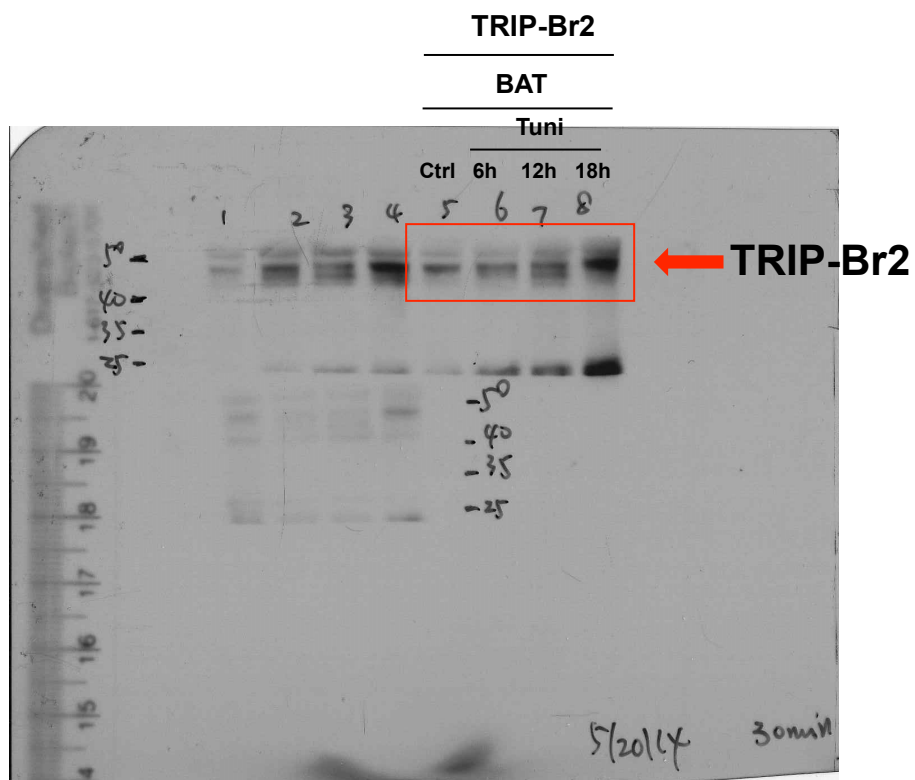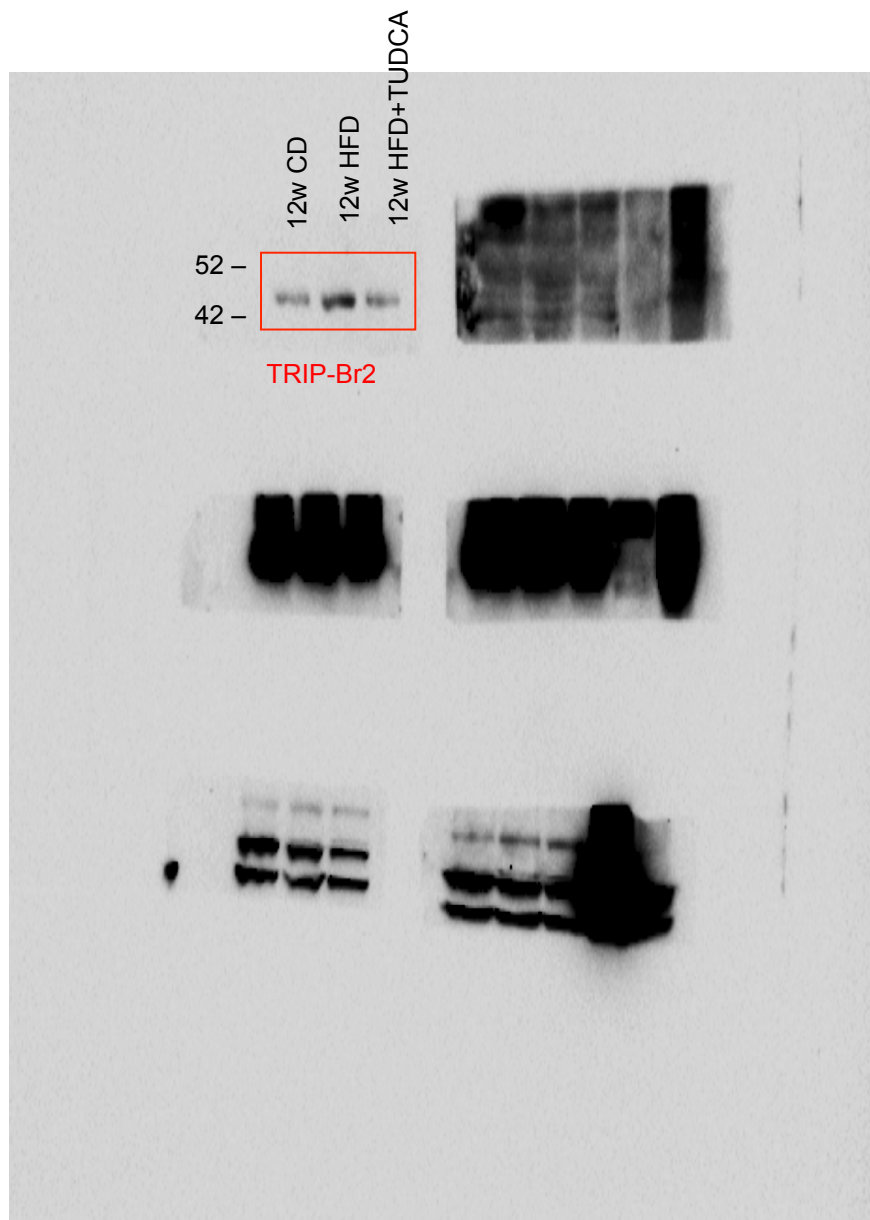

β-actin

Uncut blot for Figure 4d

BAT

12w CD
12w HFD
12w HFD+TUDCA

52 –
42 –

TRIP-Br2

Uncut blot for Figure 4d

BAT

12w CD
12w HFD
12w HFD+TUDCA

95 –

72 –

BiP

Uncut blot for Figure 4d

BAT

12w CD
12w HFD
12w HFD+TUDCA

34 –
26 –

CHOP

Uncut blot for Figure 4d

BAT

12w CD

12w HFD

12w HFD+TUDCA

52 –

42 –

β-actin

Uncut blot for Figure 5d

WT1

6h   24h

Ctr Tun Ctr Tuni

ATGL

−72
−52

Uncut blot for Figure 6b

WT1

6h **24h**

Ctr Tuni Ctr Tuni

UCP1 ➡️

−34
−27

Uncut blot for Figure 5d & 6b

WT1

6h		24h	
Ctr	Tuni	Ctr	Tuni

52 –

42 – ⟵ **β-actin**