Supplemental Figure Legends

Supplemental Figure S1. Mitochondrial fuels increase upon IL3 withdrawal in Bcl-2 and Bcl-xL expressing cells.

(**A**) Control, (**B**) MyrAkt, (**C**) Bcl-xL or (**D**) Bcl-2 expressing cells were cultured in IL3 or withdrawn from IL3 for indicated times. Cell lysates were analyzed by tandem mass spectrometry to quantitate acyl-carnitines. Acyl-chain lengths and saturation (length:saturation) are indicated and means of triplicates and standard errors are shown. Asterisks denote $p < 0.05$ by Student's t-Test of IL3 withdrawn samples compared to +IL3 samples. *Note different scales*. Data shown are representative of three or more experiments.

Supplemental Figure S2. Endogenous Bcl-2 and Bcl-xL levels are unaffected by autophagy suppression after growth factor withdrawal.

Control FL5.12 cells were transfected with control, Atg5, or Atg12 shRNAi, and cultured in IL3 or withdrawn from IL3 for ten hours. Endogenous Bcl-2 and Bcl-xL were detected by immunoblot. Data shown are representative of three or more experiments.

Supplemental Figure S3. Doxycycline effectively suppresses Atg5 mRNA expression in Atg5 Tet-Off MEFs.

Atg5 Tet-Off MEFs expressing Bcl-2 were treated with PBS or 5 μg/mL doxycycline for four days, then Atg5 mRNA was determined by quantitative real-time PCR. Means and

standard deviations from triplicate samples are shown. Asterisks denote $p < 0.05$ by Student's t-Test.

Supplemental Figure S4. Autophagy shRNAi protects Bcl-xL expressing FL5.12 cells from IL3 withdrawal.

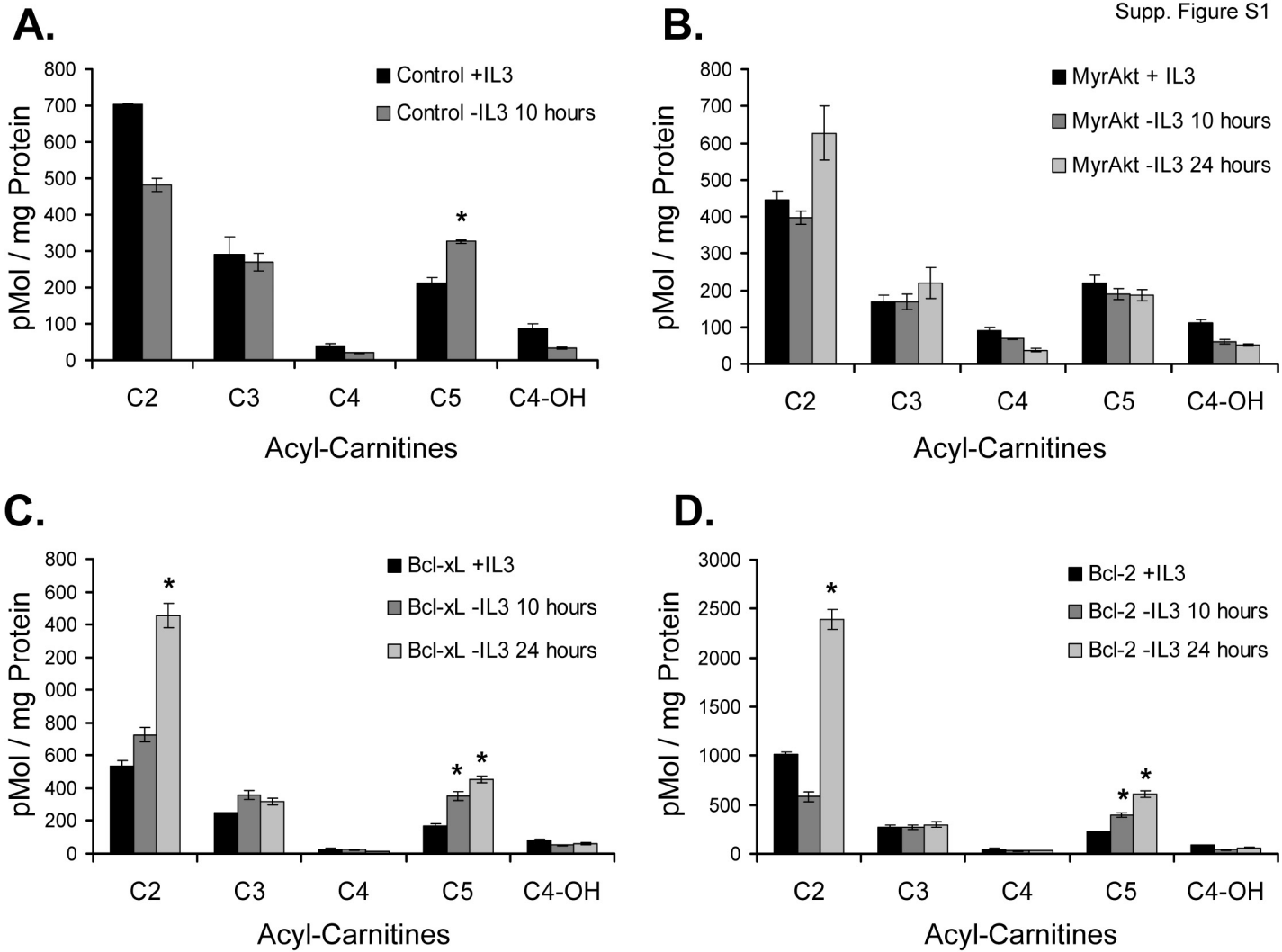
Bcl-xL-expressing FL5.12 cells were transfected with control, Beclin-1, or Atg5 shRNAi, and viability was observed over time after IL3 withdrawal. Means and standard deviations from triplicate samples are shown. Asterisks denote $p<0.05$ by Student's t-Test for multiple time points for test samples relative to control samples. Data shown are representative of three or more experiments.

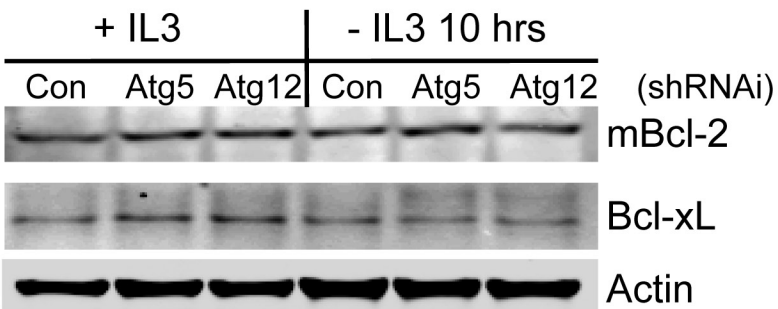
Supplemental Figure S5. Autophagy shRNAi protects Ba/F3 cells from IL3 withdrawal.

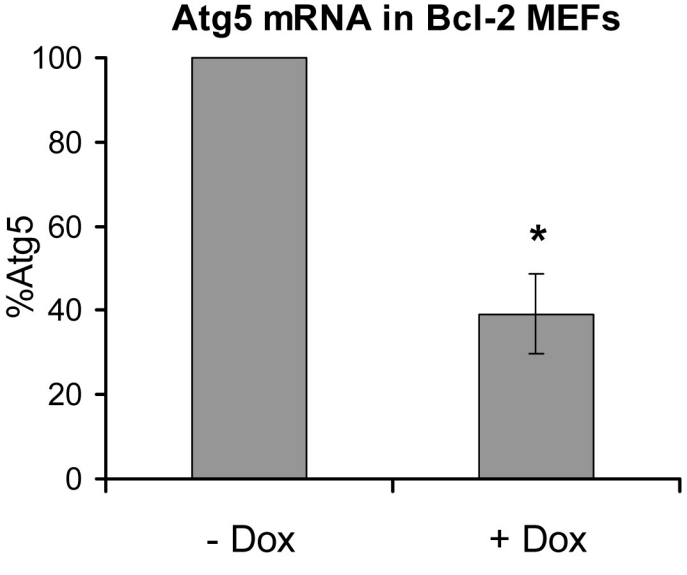
A-D. Ba/F3 (**A**) parental, (**B**) Bcl-2 expressing clone 6, (**C**) Bcl-xL expressing clone 4, or (**D**) Bcl-xL expressing clone 6 cells were transfected with control or Atg12 shRNAi and viability was observed over time after IL3 withdrawal. Means and standard deviations from triplicate samples are shown. Asterisks denote $p<0.05$ by Student's t-Test for test samples relative to control samples. Data shown are representative of three or more experiments.

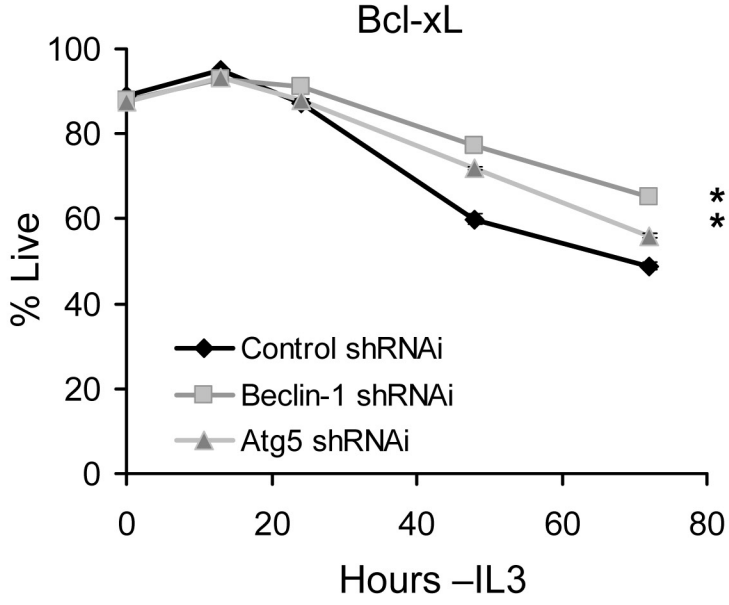
Supplemental Figure S6. Autophagy shRNAi protects 32D cells from IL3 withdrawal.

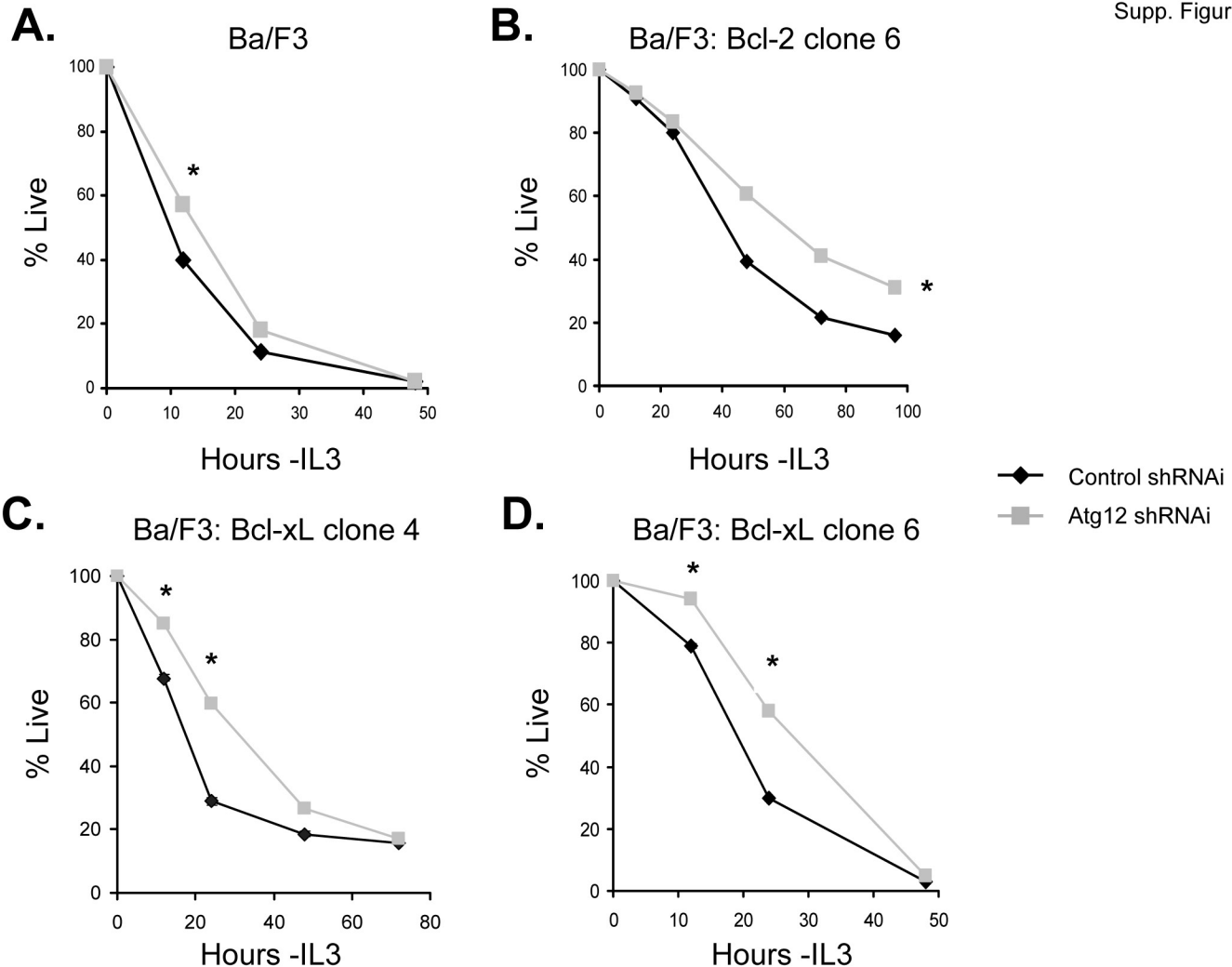
A, B. 32D (**A**) parental, (**B**) polyclonal Bcl-2 expressing cells were transfected with control or Atg12 shRNAi and viability was observed after (**A**) 48 hours and (**B**) 72 hours. Means and standard deviations from triplicate samples are shown. Asterisks denote $p<0.05$ by Student's t-Test for test samples relative to control samples. Data shown are representative of three or more experiments.

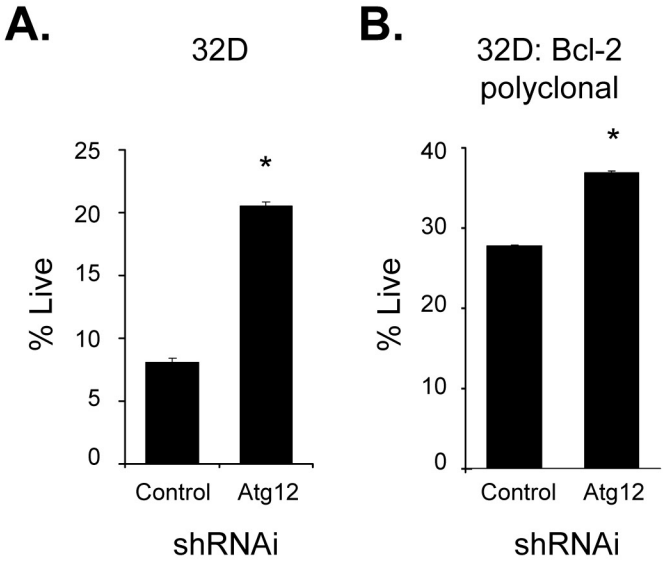

A.
Control +IL3
Control -IL3 10 hours
pMol / mg Protein
800
700
600
500
400
300
200
100
0
*
C2
C3
C4
C5
C4-OH
Acyl-Carnitines
B.
MyrAkt + IL3
MyrAkt -IL3 10 hours
MyrAkt -IL3 24 hours
pMol / mg Protein
800
700
600
500
400
300
200
100
0
C2
C3
C4
C5
C4-OH
Acyl-Carnitines
C.
Bcl-xL +IL3
Bcl-xL -IL3 10 hours
Bcl-xL -IL3 24 hours
pMol / mg Protein
800
600
400
200
000
800
600
400
200
0
*
* *
C2
C3
C4
C5
C4-OH
Acyl-Carnitines
D.
Bcl-2 +IL3
Bcl-2 -IL3 10 hours
Bcl-2 -IL3 24 hours
pMol / mg Protein
3000
2500
2000
1500
1000
500
0
*
* *
C2
C3
C4
C5
C4-OH
Acyl-Carnitines


+ IL3
- IL3 10 hrs
Con
Atg5
Atg12
Con
Atg5
Atg12
(shRNAi)
mBcl-2
Bcl-xL
Actin


Atg5 mRNA in Bcl-2 MEFs
100
80
60
40
20
0
%Atg5
*
- Dox
+ Dox


Bcl-xL
100
80
60
40
20
0
% Live
Control shRNAi
Beclin-1 shRNAi
Atg5 shRNAi
**
**
0
20
40
60
80
Hours –IL3


A.
Ba/F3
% Live
Hours -IL3
B.
Ba/F3: Bcl-2 clone 6
% Live
Hours -IL3
C.
Ba/F3: Bcl-xL clone 4
% Live
Hours -IL3
D.
Ba/F3: Bcl-xL clone 6
% Live
Hours -IL3
Control shRNAi
Atg12 shRNAi


A.
32D
% Live
25
20
15
10
5
0
*
Control
Atg12
shRNAi
B.
32D: Bcl-2
polyclonal
% Live
40
30
20
10
0
*
Control
Atg12
shRNAi