

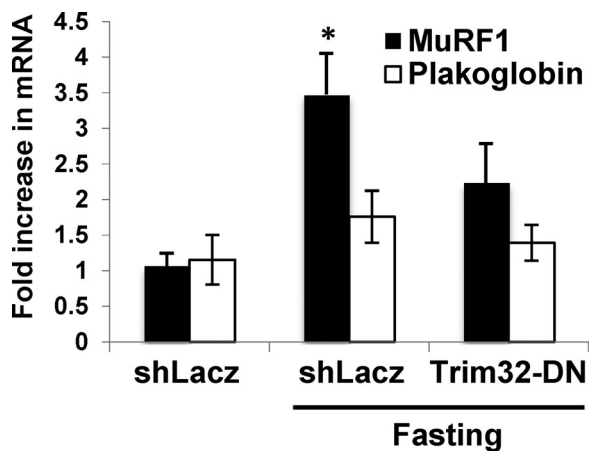
Cohen et al., <http://www.jcb.org/cgi/content/full/jcb.201304167/DC1>

Figure S1. **Plakoglobin expression does not change during fasting.** Quantitative RT-PCR of mRNA preparations from atrophying and control muscles expressing shLacz or Trim32-DN, using primers for MuRF1 and plakoglobin. Data are plotted as the mean fold change relative to fed control. $n = 4$; *, $P < 0.005$ vs. shLacz in fed.

Atrophying muscle

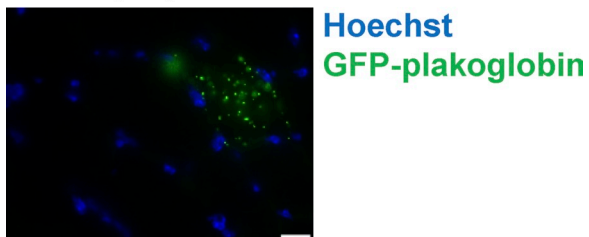


Figure S2. **Distribution of GFP-plakoglobin in muscle.** GFP-plakoglobin expressed in TA muscle shows a similar distribution to the endogenous protein.

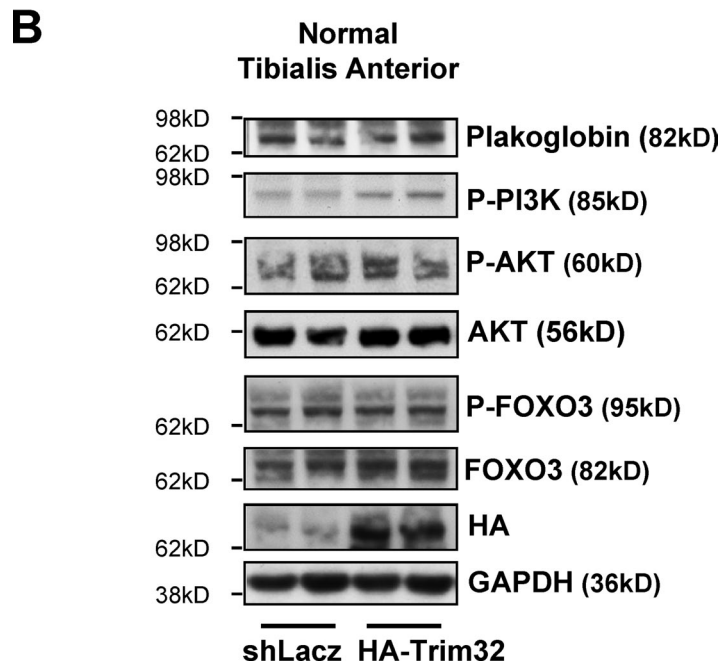
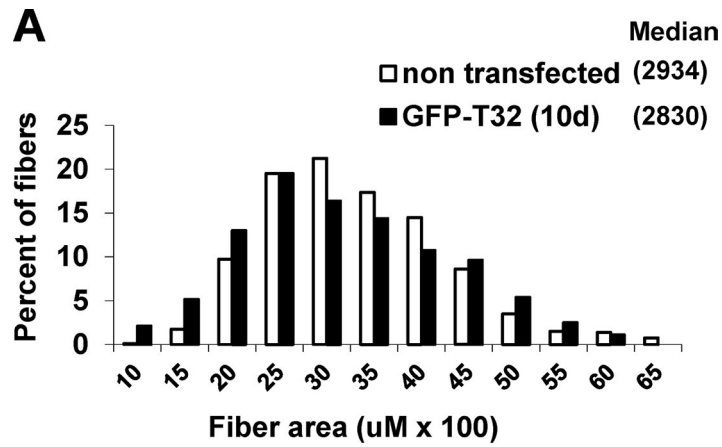


Figure S3. **Overexpression of Trim32 in normal muscle for 10 d does not induce atrophy.** (A) Cross-sectional area of 500 fibers transfected with GFP-Trim32 (black) vs. 500 nontransfected fibers (open) in the same muscle. $n = 6$. (B) Normal muscles were transfected with shLacz or HA-Trim32, and soluble extracts were analyzed by SDS-PAGE and immunoblot.

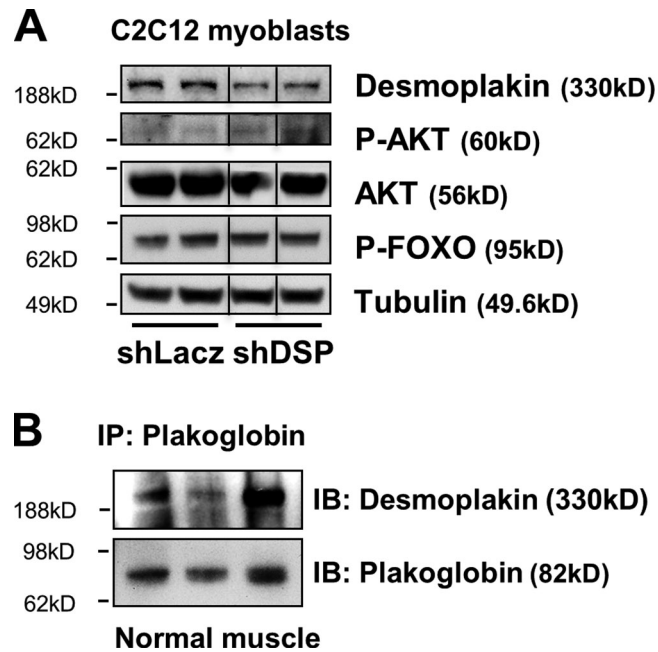


Figure S4. **Desmoplakin interacts with plakoglobin but is not essential for PI3K–Akt–FoxO signaling.** (A) Desmoplakin knockdown does not affect PI3K–Akt–FoxO signaling. C2C12 myoblasts were transfected with shLacZ or shRNA to desmoplakin (shDSP), and soluble extracts were analyzed by SDS-PAGE and immunoblot. Black lines indicate the removal of intervening lanes for presentation purposes. (B) Plakoglobin and desmoplakin interact in normal muscle. Plakoglobin was immunoprecipitated from the soluble fraction of muscles and precipitates were analyzed by immunoblotting for plakoglobin or desmoplakin.

Table S1. **qPCR primers and shRNA oligos used in the present study**

DNA	Gene	Sequence (5' to 3')
shRNA 1	Trim32	GGCTGATTGGTCACTGATA
shRNA 2	Trim32	AGCTGCTGGTCTGGACTGTT
shRNA	Plakoglobin	GGAACACAGCTACGAGAAGC
shRNA	Plakoglobin	GGGCATCATGGATGAGGATGA
shRNA	Desmoplakin	AGACCGGAAACATCATCTTT
shRNA	Desmoplakin	CAAAGAGAAATGGCTTCCCTA
qPCR primer forward	Atrogin1	TGGGTGTATCGGATGGAGAC
qPCR primer reverse	Atrogin1	TCAGCCTCTGCATGATGTTT
qPCR primer forward	MuRF1	GTCCATGTCTGGAGGTCGTT
qPCR primer reverse	MuRF1	AGGAGCAAGTAGGCACCTCA
qPCR primer forward	GAPDH	ACCCAGAAGACTGTGGATGG
qPCR primer reverse	GAPDH	CACATTGGGGTAGGAACAC
qPCR primer forward	Plakoglobin	CTGTGTGCCCTCTGTAAGCA
qPCR primer reverse	Plakoglobin	GAAGTGTCTCGCCTGAGAC