Suppl. Table S1

Transcript Profile comparison (Bakay et al, Neuromuscular Disord. 2002)

	Gene	% mdx/C57
DGC or Integrin	Integrin β2	242.4
	Integrin α7	26.6
	Filamin A	18.5
	Dystroglycan	-15.7
	γ Sarcoglycan	-17
	Dystrophin	-72.9
FA and Cytoskeleton	γ Actin	76.7
	Vinculin	35.1
	NMM2A	33
	Rhotekin α	29
	Paxillin	14.4
	NMM2B	4.8
	SMM2	-4.6
	FAK (PTK2)	-27
MAPK's	MAPK3 (ERK1/2)	116
	MAPK14	-15.7
	MAPK12	-29.9



Suppl. Fig. S2

Stretch activation of MAPK pathways is generic and sustained, but phospho-Paxillin consistently shows basal levels.



Suppl. Fig. S3 Co-Localization of Paxillin in Myotubes



Suppl. Fig. S4 Blebbistatin relaxes tension and decreases (P)-ERK in *ex vivo* Myofibers



Suppl. Fig. S5

GFP-Paxillin diffusion in myoblasts based on FRAP.



Suppl. Fig. S6 Pax overexpression does not remodel adhesions or contribute to adhesion strength, consistent with a non-structural role in signaling



Suppl. Fig. S7

Spontaneous relaxation of ySG-/- but not mdx myotubes

