

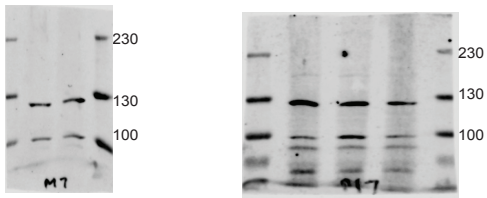
Supplementary Fig1

A. Representative images showing co-localization of endogenous NMMIIA and exogenous GFP-FLiI to collagen coated beads in the presence and absence of BAPTA/AM and localization to BSA coated beads showing specificity of binding to collagen substrate.

B. GD25 cells treated with and without TRPV4 agonist.

C. Immunoprecipitation experiment shows collagen ligation induced interaction between FLiI and phosphorylated myosin light chain.

D. Calcium ratiometric measurements representing TRPV4 channel antagonist-treated and untreated cells were stimulated with agonists for L-type channels, voltage-gated channels, N-type channels and TRPV1 calcium channels.



Abcam antibody M7
cat# ab109438

alomone labs antibody M7
cat# ACC-047

Supplementary Fig2
Western Blots of Flii WT cell lysate probed with TRPM7 antibody.

Table S1. Primers used in this study.

Gene	GenBank No.	Primer sets (5'-3')	Amplicon Size (bp)	Melting Temp	Intron Spanning	Reference
18s rRNA	NR_003278	F GTAACCCGTTGAACCCATT R CCATCCAATCGGTAGTAGCG	151	60.40 62.45	NA	(Bentovim et al., 2012)
TRPC1 (TRPC1A-Beta)	AF191551.1	F GATGTGTCTTTGCCCAAGC R CTGGACTGGCCAGACATCTAT	127	60.16 62.57	Yes	(Storch et al., 2012)
TRPC6 (Trp6)	U49069.1	F ACTGGTGTGCTCCTTGACAG R GAGCAGCCCCAGGAAAAT	101	62.32 59.90	Yes	(Storch et al., 2012)
TRPV1	AJ620495.1	F CCGGCTTTTTGGGAAGGGT R GAGACAGGTAGGTCCATCC	142	62.32 62.32	No	(Qi et al., 2015)
TRPV2	AB021665.1	F TGCTGAGGTGAACAAAGGAAAG R TCAAACCGATTGGGTCCTGT	147	60.81 60.61	Yes	(Jang et al., 2012)
TRPV4 (Trp12)	AJ296078.1	F TCACCTTCGTGCTCCTGTTG R AGATGTGCTTGCTCCTTG	84	62.45 60.40	No	(Mochizuki et al., 2009)
TRPM3	AK051867.1	F CAAAGATGACATGCCCTATATGA R CTTTCTTTCTGGATGATTCCC	158	59.20 58.66	Yes	(Kunert-Keil et al., 2006)
TRPM7	AY032951.1	F AGGATGTCAGATTTGTCAGCAAC	128	60.99	Yes	(Jang et al., 2012)

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Supplementary Table 2: Dilutions of the antibodies used for immunostaining (IS) and Western blotting (WB)

Antibody Name	Source	Catalogue Number	IS Dilutions	WB Dilutions
Paxillin	Sigma Aldrich	P1093	1:100	
Vinculin	Sigma Aldrich	V9131	1:100	
$\alpha_2\beta_1$ Integrin	Sigma Aldrich	MAB2141Z	Blocking Ab 1:50	
Nebulin	Sigma Aldrich	N9891		Immunoprecipitation 1:500
β_1 Integrin	BD Pharmingen	Ab95623	1:50	
Flightless-1	Abcam	2899-1	1:100	1:2000
TRPV ₄	Alomone Labs	ACC-034	1:100	1:1000
TRPV ₂	Alomone Labs	ACC-039		1:1000
TRPV ₁	Alomone Labs	ACC-030		1:1000
TRPP ₂	Alomone Labs	ACC-052		1:1000
TRPM ₇	Alomone Labs	ACC-047		1:1000