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REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
Sheep anti mouse GEFH1	Exalpha Biologicals, Shirley, MA	X1089
Rabbit anti-GEFH1	Abcam, Waltham, MA	ab155785
Rabbit anti- Mouse Arhgef2(57-76)	Pacific immunology corp. Ramona, CA	PAC17843/4
Rabbit anti-Human Arhgef2(6-28)	Pacific immunology corp. Ramona, CA	PAC17845/6
Rabbit anti-GAPDH	Cell Signaling Technologies, Danvers, MA	Cat# 92310
Mouse anti-ZO-1 (1A12)	Invitrogen, Carlsbad, CA	Cat# 33-9100
Rat anti-Occludin (6B8A3)	Cell Signaling Technologies, Danvers, MA	Cat# 68534
Rabbit anti-Claudin-2 (E1H9O)	Cell Signaling Technologies, Danvers, MA	Cat# 48120
Rabbit anti- Claudin3	Invitrogen, Carlsbad, CA	Cat# 34-1700
Goat anti- E-Cadherin	R&D Systems, Minneapolis, MN	Cat# AF748-SP
Rabbit anti-b-Catenin (D10A8)	Cell Signaling Technologies, Danvers, MA	Cat# 8480
Goat anti-Nectin 3	Invitrogen, Carlsbad, CA	Cat# PA5-47441
Goat anti- Nectin3	R&D Systems, Minneapolis, MN	Cat# AF3064-SP
Rabbit anti- Afadin (D1Y3Z)	Cell Signaling Technologies, Danvers, MA	Cat# 13531T
Rabbit anti-ATP1A1	Cell Signaling Technologies, Danvers, MA	Cat# 3010S
Rabbit anti-ATP1B1	Cell Signaling Technologies, Danvers, MA	Cat# 44759S
Mouse anti- α -Tubulin (DM1A)	Cell Signaling Technologies, Danvers, MA	Cat# 3873P
Mouse anti- β -Actin (8H10D10)	Cell Signaling Technologies, Danvers, MA	Cat# 3700S
Rabbit anti-IRF5	Abcam, Waltham, MA	Cat# 181553
Anti- Phospho-IRF5	Invitrogen, Carlsbad, CA	Cat# PA5-64760
Rabbit anti- IKK ϵ	Cell Signaling Technologies, Danvers, MA	Cat# 2905P
Rabbit anti- Phospho- IKK ϵ	Cell Signaling Technologies, Danvers, MA	Cat# 8766S
Anti- STAT1	Cell Signaling Technologies, Danvers, MA	Cat# 9172
Anti- Phospho-STAT1	Cell Signaling Technologies, Danvers, MA	Cat# 7649P
Rabbit Anti- P65	Cell Signaling Technologies, Danvers, MA	Cat# 8242S
Mouse anti- phospho-P65	Cell Signaling Technologies, Danvers, MA	Cat# 13346S
Rabbit anti- STING	Cell Signaling Technologies, Danvers, MA	Cat# 13647S
Rabbit anti-TBK1	Cell Signaling Technologies, Danvers, MA	Cat# 3504
Rabbit anti- Phospho-TBK1	Cell Signaling Technologies, Danvers, MA	Cat# 5483S
Rabbit anti-IL-1B	Cell Signaling Technologies, Danvers, MA	Cat# 31202
Rabbit anti- ATG16L1	Cell Signaling Technologies, Danvers, MA	Cat# 8089
Rabbit anti- BECLIN1	Cell Signaling Technologies, Danvers, MA	Cat# 3495T
Rabbit anti-LC3	Cell Signaling Technologies, Danvers, MA	
Mouse anti- S6	Cell Signaling Technologies, Danvers, MA	Cat# 2317
Rabbit Phospho- S6	Cell Signaling Technologies, Danvers, MA	Cat# 4858
Rabbit anti- P70S6K	Cell Signaling Technologies, Danvers, MA	Cat# 34475T

Mouse anti- Phospho-P70S6K	Cell Signaling Technologies, Danvers, MA	Cat# 9206T
Rabbit anti- MLKL	Cell Signaling Technologies, Danvers, MA	Cat # 14993S
Anti-GSDMD	Proteintech, Rosemont, IL	Cat# 20770-1-AP
Anti-CASPASE-1	Abcam, Waltham, MA	Cat# Ab108362
Rabbit anti- cleaved CASPASE-3 (5A1E)	Cell Signaling Technologies, Danvers, MA	Cat# 9664
Rabbit anti- CASPASE-8(D35G2)	Cell Signaling Technologies, Danvers, MA	Cat# 4790S
Rabbit anti-MLKL (D2I6N)	Cell Signaling Technologies, Danvers, MA	Cat# 14993
Rabbit anti-RIP3 (D94C12)	Cell Signaling Technologies, Danvers, MA	Ca# 3493S
Anti-rabbit-Ig G-HRP	Cell Signaling Technologies, Danvers, MA	Cat# 7074
Anti-mouse-Ig G-HRP	Cell Signaling Technologies, Danvers, MA	Cat# 7078
Anti-sheep-Ig G-HRP	Invitrogen, Carlsbad, CA	Cat# A16041
Anti-goat-Ig G-HRP	Santa Cruz biotech., Dallas, TX	Cat# SC-2354
Anti-Goat IgG AF488	Invitrogen, Carlsbad, CA	Cat# A32814TR
Anti-Rabbit IgG AF594	Invitrogen, Carlsbad, CA	Cat# A11037
Anti- Mouse IgG AF488	Invitrogen, Carlsbad, CA	Cat# A-21202
Anti- Goat IgG AF647	Invitrogen, Carlsbad, CA	Cat# A-21447
STAR Red goat anti-rabbit	Abberior Instruments GmbH, Gottingen, Germany	Cat# STRED-1002-500UG
STAR Orange goat anti-mouse	Abberior Instruments GmbH, Gottingen, Germany	Cat# STORANGE-1001-500UG
STAR Red Donkey anti-goat	Abberior Instruments GmbH, Gottingen, Germany	Cat# STORANGE-1055-500UG
ProLong™ Gold Antifade Mountant with DNA Stain DAPI	Invitrogen, Carlsbad, CA	Cat# P36931
abberior MOUNT, SOLID ANTIFADE	Abberior Instruments GmbH, Gottingen, Germany	Cat# MM-2013
Bacterial and virus strains		
One shot Top 10 Competent E. Coli	Invitrogen, Carlsbad, CA	C404003
Listeria monocytogenes	Microbiologics.com	01249UV-V
Biological samples		
Chemicals, peptides, and recombinant proteins		
FBS	Gibco	26140-079, 500ML
Penicillin/ streptomycin	Sigma-Aldrich	P4458-100ML
RPMI-1640	Sigma	RO883-500ML
DMEM/high glucose	Cytiva (Hyclone)	SH30243-01

0.25% trypsin	Gibco	25200-056 100ML
70 um cell strainers	Falcon	352350
10 cm Petri dish	Fisherbrand	FB0875713
15 ml tube	Falcon	352097
50 ml tube	Falcon	352098
1.5mL microcentrifuge tube	Eppendorf	022363204
384-well PCR plates	Bio-Rad	HSP3805
PCR film	Eppendorf	0030127781
PCR 8-tube strips	USA scientific	21102
6-well plate	Corning Incorporated	3506
10-cm culture dish	Corning	430167
PBS (tablet)	Millipore Sigma	524650-1EA
Pierce RIPA buffer	Thermo Scientific	89900
Proteinase inhibitors cocktail	Sigma-Aldrich	P8340-1ML
Tween 20 (CAS: 9005-64-5)	Fisher Scientific	BP337-500
10X Tris/glycine buffer	Bio-Rad	1610771
10X Tris/glycine/SDS buffer	Bio-Rad	1610772
Methanol (CAS: 67-56-1)	Sigma-Aldrich	179337-500ML
8-16% Tris-Glycine Gel	Invitrogen, Carlsbad, CA	XP08162BOX
4-12% Tris-Glycine Gel	Invitrogen, Carlsbad, CA	NW04122BOX
Immobilon western chemiluminescent HRP substrate	Millipore	WBKLS0100
Pierce IP lysis buffer	Thermo Scientific	87787
Bio-Rad XT sample buffer X4	Bio-Rad	1610791
10% SDS	Invitrogen, Carlsbad, CA	15553-035 100ML
50X TAE buffer	Invitrogen, Carlsbad, CA	24710-030 1000ML
Luria agar	Research Product International	L24020-500
Luria broth	Research Product International	L24040-1000
Prolong gold antifade Mountant with DAPI	Invitrogen, Carlsbad, CA	P36931
Normal Donkey Serum	Jackson Immuno Research Lab	NC9624464
Matrigel [®] Matrix	Corning [®]	#356231
GlutaMAX [™]	Gibco	ref 35050
Advanced DMEM/F12	Gibco	ref 12634-010
PenStrep	Gibco	ref 15140-122
Y-27632 dihydrochloride	TOCRIS	cat# 1254
SB 431542	TOCRIS	cat# 1614
Antibiotic-Antimycotic	Gibco	ref# 15240-062
24 well Nunclon Delta Surface plate	Thermo Fisher Scientific	cat# 142475
70 um cell strainer	Falcon	cat#352350

FBS	Biowest	cat#S1620
Critical commercial assays		
RNeasy plus mini RNA kit	Qiagen	74134
QuantiTect Reverse Transcription kit	Qiagen	205311
Endofree plasmid maxi kit	Qiagen	12362
PowerTrack sybr green master mix	Applied biosystems	A46109
Primescript RT reagent kit	TaKaRa	RR037a
Pierce BCA protein assay kit	Thermo scientific	23227
Deposited data		
Experimental models: Cell lines		
ARPE-19	ATCC	CRL-2302
Caco2	ATCC	HTB-37
T84	ATCC	CCL-248
HCT116	ATCC	CCL-247EMT
HT29	ATCC	HTB-38
Experimental models: Organisms/strains		
ARHGEF2-/- mice	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4066330/	n/a
C57BL/6	The Jackson Laboratory	000664
B6.Cg-Tg(Vil1-cre/ERT2)23Syr/J	The Jackson Laboratory	020282
ARHGEF2-isoform-201 flox mice	See in Methods in this manuscript	
ARHGEF2-isoform-207 flox mice	See in Methods in this manuscript	
Oligonucleotides		
Arhgef2-lox1-f	TGCTTTTCTTAGCATGGCTGT	n/a
Arhgef2-lox1-r	GGACATCTCCACAGCCAGG	n/a
Arhgef2-lox2-f	AGGGCTGTGGAATTCTCAGC	n/a
Arhgef2-lox2-r	AGAGCCCTGTGTAGACCCTT	n/a
Arhgef2-lox4-f	CCCGGCACAGAGAAATCGTA	n/a
Arhgef2-lox4-r	ACCTGGCGTCCAGATAAACA	n/a
Arhgef2-lox5-f	TGCCATGCTTGGATAGCACA	n/a
Arhgef2-lox5-r	GCAAGGATGCTTCCACAAG	n/a
oIMR1084	GCG GTC TGG CAG TAA AAA CTA TC	n/a
oIMR1085	GTG AAA CAG CAT TGC TGT CAC TT	n/a
oIMR7338	CTA GGC CAC AGA ATT GAA AGA TCT	n/a
oIMR7339	GTA GGT GGA AAT TCT AGC ATC ATC C	n/a
IL6-F	CTT CAC AAG TCG GAG GCT TAA T	n/a

IL6-R	ACT CCA GGT AGC TAT GGT ACT	n/a
IFN beta-F	GAT GAC GGA GAA GAT GCA GAA G	n/a
IFN beta-R	ACC CAG TGC TGG AGA AAT TG	n/a
GAPDH -F	GGA GAA ACC TGC CAA GTA TGA	n/a
GAPDH -R	CCT GTT GCT GTA GCC GTA TT	n/a
Hu GEFH1-201-qPCR-F	CTGTACCAAGGTCAAGCAGAAG	n/a
Hu GEFH1-201-qPCR-R	TCCCGGATGGTTGTCTTACT	n/a
Hu GEFH1-219-qPCR-F	ATG CTT TCC AAG TCT GTA CCC	n/a
Hu GEFH1-219-qPCR-R	CAG CGT TTC CTG AGG TCA AT	n/a
Recombinant DNA		
pCMV6-AC-GFP	Origene	PS100010
pCMV6-AC-RFP	Origene	PS100034
Arhgef2 (NM_008487) Mouse Tagged ORF Clone	Origene	MG211388
pCMV-human Arhgef2-GFP	https://pubmed.ncbi.nlm.nih.gov/30902986/	
pCMV-human Arhgef2S372A-GFP	https://pubmed.ncbi.nlm.nih.gov/30902986/	
pCMV-human Arhgef2- 219N-RFP	See in Methods in this manuscript	
pCMV-human Arhgef2- 219N-S28A-RFP	See in Methods this manuscript	
Software and algorithms		
Excel	Microsoft Office	N/A
GenePix Pro 7	Molecular Devices	N/A
GraphPad Prism 9	GraphPad	N/A
MestReNova Software	Mestrelab Research S.L.	N/A
Other		
Slides, Nexterion Slide H	Schott Minifab	N/A
16 Well Slide Module (Multi- Array Slide System)	Grace Bio-Labs	206862
Stainless Steel Spring Clips	Grace Bio-Labs	204838
MicroAmp™ Optical Adhesive Film	Applied Biosystems	4311971
FoilSeal™	Excel Scientific	XTRFOIL100