

Supplementary Table.

1. Chemicals and reagents:

Chemicals and reagents	Catalog.no	Supplier
Colitis Grade DSS	MFCD00081551	MP Biomedicals
Infliximab	HY-P9970	MedChemExpress
Human IgG1 kappa, Isotype Control	HY-P99001	MedChemExpress
R406	HY-12067	MedChemExpress
RPMI-1640	15364138	Gibco
PBS	SH30256.FS	Cytiva
FBS	11570506	Gibco
MEM NEAA	11140050	Gibco
TREM1 ELISA kit	JL52300	JL Bio
Human TNF- α	300-01A	PeproTech
PMA	S7791	Selleck
Lipofectamine TM 3000	L3000015	Invitrogen
Opti-MEM TM	31958-062	Invitrogen
RFect	11013	BIOG
Glutaraldehyde,4%(EM Grade)	P1127	Solarbio
4% paraformaldehyde	MFCD00133991	Thermo Scientific
QuickBlock TM Blocking Buffer for Immunol Staining	P0260	Beyotime
Immunostaining Permeabilization Buffer with Triton X-100	P0096	Beyotime
Antifade Mounting Medium with DAPI	P0131	Beyotime
RIPA	P0013	Beyotime
PMSF	ST507	Beyotime
Protease and phosphatase inhibitor cocktail, 50X	P1050	Beyotime
BCA Protein Assay Kit	T9300A	TaKaRa
PAGE Gel Preparation Kit (7.5%)	PG111	Epizyme
PAGE Gel Preparation Kit (10%)	PG112	Epizyme
PAGE Gel Preparation Kit (12.5%)	PG113	Epizyme
Multicolor Prestained Protein Ladder	WJ103	Epizyme
PVDF membrane	IPCH00010	Millipore
QuickBlock TM Blocking Buffer for Western blot	P0252	Beyotime
Chemiluminescent HRP substrate	WBKLS0500	Millipore
Pierce Classic Magnetic IP/Co-IP Kit	88804	Thermo Scientific
BIOG RNA Cell&Tissue Kit	51024U	BIOG
PrimeScriptRT Master Mix	RR036A	TaKaRa
Hieff UNICON Power qPCR SYBR Green Master Mix	11199ES08	Yeaston
Cytotoxicity LDH Assay Kit-WST	CK-12	DojinDo
Annexin V, FITC Apoptosis Detection Kit	AD10	DojinDo

2. Antibodies

Antibody	Catalog.no	Supplier
GSDMD	Ab210070	Abcam
Cleaved Gasdermin D	E7H9G	CST
Caspase-8	13423-1-AP	ProteinTech
LAMP1	67300-1-Ig	ProteinTech
ITCH for western/co-IP	12117s	CST
ITCH for IF	20920-1-AP	ProteinTech
TAK1 for WB/co-IP	5206s	CST
TAK1 for IF	67707-1-Ig	ProteinTech
TERM1	PA5-95477	Thermo Scientific
SYK	13198T	CST
CFLIP	10394-1-AP	ProteinTech
β -Actin	3700s	CST
Alexa Fluor® 488 Conjugated Anti-rabbit IgG	4412s	CST
Alexa Fluor® 488 Conjugated Anti-mouse IgG	4408s	CST
Cy3-conjugated Goat Anti-Rabbit IgG	SA00009-2	ProteinTech
Cy3-conjugated Goat Anti-Mouse IgG	SA00009-1	ProteinTech
HRP-linked Anti-rabbit IgG	7074s	CST
HRP-linked Anti-mouse IgG	7076s	CST
HRP-conjugated Rabbit Anti-Goat IgG	SA00001-4	ProteinTech

3. Primers

Primer	Sequence	Supplier
Human TNF- α	Tnt3991a	BioTNT
Human IL-1 β	Tnt1262	BioTNT
Human TREM1	PRIM052098	BioTNT
Mouse TREM1	PRIM124393	BioTNT
Human ITCH	PRIM027998	BioTNT
Human TAK1	PRIM032494	BioTNT
Primer	Forward Sequence	Reward Sequence
Mouse TNF- α	GATCGGTCCCCAAAGGGATG	CCACTTGGTGGTTTGTGAGTG
Mouse IL-1 β	TGCCACCTTTTGACAGTGATG	TGATGTGCTGCTGCGAGATT
Human IL-12 p40	CCTGCCCAGAGCAAGATGTG	CGAGGGGAGATGCCAGAAAA
Mouse IL-12 p40	TGGGAGTACCCTGACTCCTG	AGGAACGCACCTTTCTGGTT
Human IL-23 p19	ACTAGTGGGACACATGGATCT	CTGGTGGATCCTTTGCAAGC
Mouse IL-23 p19	ACCAGCGGGACATATGAATCT	AGACCTTGGCGGATCCTTTG
Mouse ITCH	ACCCTAAAGTTGTGGGGATGG	AGTTTGGCTGAGATGACAGTGA
Mouse TAK1	GATCATGTCGACAGCCTCCG	CTCCTCTCCGACAACCTCT

4. Plasmid sequence

Plasmid	Vector	Supplier
TREM1 plasmid	Ubi-MCS-SV40-puromycin	GeneChem
ITCH plasmid	PGMLV-CMV-H_ITCH-3 $\times$ Flag-PGK-Puro	GeneChem
ITCH Y344	PGMLV-CMV-H_ITCH(p.Y344G)-3 $\times$ Flag-PGK-Puro	GenoMediTech
ITCH Y620	PGMLV-CMV-H_ITCH(p.Y620G)-HA-PGK-puro	GenoMediTech
ITCH Y737	PGMLV-CMV-H_ITCH(p.Y737G)-myc-PGK-Puro	GenoMediTech
ITCH Y772	PGMLV-CMV-H_ITCH(p.Y772G)-6 $\times$ his-PGK-Puro	GenoMediTech

5. ITCH-KO shRNA sequence

ID	5'	stem	loop	stem	3'
ITCH-RNAi(33275-1)-a	Ccgg	AACCACAAC ACACGAATTA CA	CTCGAG	TGTAATTCGT GTGTTGTGGT T	TTTTT g
ITCH-RNAi(33275-1)-b	aattcaaaaa	AACCACAAC ACACGAATTA CA	CTCGAG	TGTAATTCGT GTGTTGTGGT T	
ITCH-RNAi(33276-1)-a	Ccgg	ATGCAGGGA AGTCCTTTGG TA	CTCGAG	TACCAAAGG ACTTCCCTGC AT	TTTTT g
ITCH-RNAi(33276-1)-b	aattcaaaaa	ATGCAGGGA AGTCCTTTGG TA	CTCGAG	TACCAAAGG ACTTCCCTGC AT	
ITCH-RNAi(33277-1)-a	Ccgg	CCAGTTGGA CTCAAGGATT TA	CTCGAG	TAAATCCTTG AGTCCAAC GG	TTTTT g
ITCH-RNAi(33277-1)-b	aattcaaaaa	CCAGTTGGA CTCAAGGATT TA	CTCGAG	TAAATCCTTG AGTCCAAC GG	

6. The disease activity index scoring method

Score	Weight reduction(%)	Stool form	Bleeding
0	<=0	Normal	OBT(-)
1	1%-5%	Slightly soft stool	OBT(+)
2	6%-10%	Obviously soft stool	Slightly bloody stool
3	11%-15%	Diarrhea	Obviously bleeding
4	>=15%		

7. Colitis histopathological score system

Score	Inflammation	Lesion depth	Crypt damage	Lesion range
0	Absence	Absence	Absence	0
1	Mild	Mucosal layer	Basal 1/3	1%-25%
2	Moderate	Submucosa	Basal 2/3	26%-50%
3	Severe	Muscular layer	Epithelial cells intact only	51-75%
4			Entire damage	76%-100%

8. Primers used in DNA sequencing to confirm plasmid sequence.

Plasmid	Primer	Primer sequence
H_ITCH	CMV-F	CGCAAATGGGCGGTAGGCGTG
	DF0051-1257VR	CTCCAGACTGCCTTGGGAAAAG
	DF1155F1N	GTGTGTGGAGTCACCAGAC
	DF1155F2	TAGACCTCCAAGACCTTCACG
	DF1155F3N	AGAATTTGATCCTCTTGGTCC
	DF1155F4N	ACATGAAGTGTTGAACCC
H_ITCH(p.Y334G)	CMV-F	CGCAAATGGGCGGTAGGCGTG
	PGK-	GCCAGAGGCCACTTGTGTAG
	35605W4F-82282	GGCAGATTTATTGCCATGGC
	35605W2F-82280	CATCTGAAGGAGCAACATCTGG
	35605W3F-82281	GAAGACCCCAGAAGTCAAGGTC
	35605W1F-82279	CAGCTTGGAGGTGACAAAGAGC
H_ITCH(p.Y620G)	CMV-F	CGCAAATGGGCGGTAGGCGTG
	PGK-R	GCCAGAGGCCACTTGTGTAG
	35605W4F-82282	GGCAGATTTATTGCCATGGC
	35605W2F-82280	CATCTGAAGGAGCAACATCTGG
	35605W3F-82281	GAAGACCCCAGAAGTCAAGGTC
	35605W1F-82279	CAGCTTGGAGGTGACAAAGAGC
H_ITCH(p.Y737G)	CMV-F	CGCAAATGGGCGGTAGGCGTG
	PGK-R	GCCAGAGGCCACTTGTGTAG
	35605W2F-82280	CATCTGAAGGAGCAACATCTGG
	35605W3F-82281	GAAGACCCCAGAAGTCAAGGTC
	35605W1F-82279	CAGCTTGGAGGTGACAAAGAGC
	71392W1R-82884	GCAGGTTCCAGTAACAAACTGC
H_ITCH(p.Y772G)	35605W1F-82279	CAGCTTGGAGGTGACAAAGAGC
	35605W2F-82280	CATCTGAAGGAGCAACATCTGG
	35605W3F-82281	GAAGACCCCAGAAGTCAAGGTC
	71394W1R-83590	GATCAGCAAATCCTCCTACTGGC
	CMV-F	CGCAAATGGGCGGTAGGCGTG

	PGK-R	GCCAGAGGCCACTTGTGTAG
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