

Supplemental Table 1. Baseline characteristics of patients and controls

	AS no gut inflammation (N=20)	AS acute gut inflammation (N=11)	AS chronic gut inflammation (N=19)	Controls (N=20)
Age, mean (range) years	34 (18-56)	37 (21-55)	33 (20-50)	47 (23-58)
Sex, no. (%) female	5 (25)	3(37)	5 (17)	10 (50)
HLA-B27 (%)	100%	100%	100%	-
Disease duration, mean (range) months	42 (14-60)	38 (11-51)	36 (10-56)	-
CRP (mg/l), mean (range)	3 (0.5-5)	4 (1.7-8.2)	5 (3-9)	-
Axial involvement, no. (%)	20 (100)	11 (100)	30 (100)	-
Peripheral arthritis, no. (%)	3 (15)	2 (18)	6 (20)	-
Enthesitis/dactylitis, no. (%)	3 (15)	3 (27)	2 (7)	-
Uveitis, no. (%)	2 (10)	0 (0)	2 (7)	-
ASDAS score, mean (range)	3.4 (2.4-4.6)	3.8 (2.8-4.6)	4.4 (3.2-5)	-
NSAIDs (%)	5(25)	4 (36)	8 (27)	-
Salazopyrin (%)	-	36	4 (13)	-
Methotrexate (%)	-	-	-	-
TNF-blocking agents (%)	-	-	-	-

Supplemental Table 2: List of antibodies and primers

Antibody	Immunohistochemistry	Flow cytometry
Anti-human Occludin	Dako, Glostrup, Denmark	/
Anti-human Claudin 4	Dako, Glostrup, Denmark	/
Anti-human Zonulin	LsBio,	/
Anti-human CD31	Abcam, Cambridge, UK	/
Anti-human PV-1	Abcam, Cambridge, UK	/
Anti-human GFAP	Abcam, Cambridge, UK	/
Anti-human CD14	/	Becton, Dickinson USA
Anti-human CD163	/	Becton, Dickinson USA
Anti-human cMAF	/	Abcam (Cambridge)
Anti-human HLA-DR	/	Abcam (Cambridge)
Anti-human IL-23p19	/	Abcam (Cambridge)
Anti-rat IL-23p19	Abcam (Cambridge)	/
Anti-rat IL-22	Abcam (Cambridge)	/
Anti-rat CD3	Abcam (Cambridge)	/
Anti-rat CD68	Abcam (Cambridge)	/
Anti-LPS	AbCam (Cambridge)	/
Primers		
Occludin	Hs00170162_m1	
Claudin 4	Hs00976831_s1	
Zonula Occludens 1	Hs01551861_m1	
Zonulin	Hs00978377_m1	
VE-cadherin	Hs00170986_m1	
JAM-A	Hs00262270_s1	
PV1	Hs00229941_m1	
18s	Hs99999901_s1	
GAPDH	Hs02758991_g1	

Supplemental Table 3. Bacteria and histological changes in AS patients and controls

	<b>Adherent bacteria: edema</b>	<b>Adherent Bacteria: vasculitis</b>	<b>Adherent Bacteria: detachment</b>	<b>Invading bacteria: edema</b>	<b>Invading bacteria: vasculitis</b>	<b>Invading bacteria: detachment</b>
<b>AS no gut inflammation (N=20)</b>	4	-	-	4	4	4
<b>AS acute inflammation (N=11)</b>	5	-	-	6	6	6
<b>AS chronic inflammation (N=19)</b>	7	-	-	9	9	9
<b>Controls (N=20)</b>	-	-	-	-	-	-