

Table S1. Upregulated 64 genes are found between Crohn's disease and Ankylosing Spondylitis (AS).

ADAM30	IGDCC3	LMX1B	MIR16-1	MIRLET7F2	PCAT4	TMPRSS12
AGTR1	ITIH6	LOC100132813	MIR181A1	OR2G2	PCDHB18P	VSX2
ATP4B	LCAL1	LOC100506682	MIR2052HG	OR2T11	PHEX-AS1	VWC2L-IT1
CABCOCO1	LINC00692	LOC101927575	MIR361	OR5K1	ROR1-AS1	WFDC13
CFTR	LINC01490	LOC101928437	MIR3684	OR6A2	RPE65	
DIO2-AS1	LINC01667	LOC101928626	MIR3925	OR9A2	SNORA30B	
FLG2	LINC01833	LOC105369507	MIR4317	P4HA3-AS1	SNORA48B	
FOXN4	LINC01990	LOC105378146	MIR4504	PACRG-AS3	SNORD116-30	
GREM1	LINC02261	LOC340512	MIR563	PAPOLB	SPATA31C1	
IFNL2	LINC02302	LOC649352	MIR5687	PATE2	TMEM215	

Table S2. The reactome pathway analysis of upregulated genes in both AS and Crohn's datasets.

Pathway identifier	Pathway name	#Entities found	#Entities total	Entities ratio	Entities pValue
R-HSA-9752946	Expression and translocation of olfactory receptors	10	813	0,05294	0,002995411
R-HSA-381753	Olfactory Signaling Pathway	10	887	0,057759	0,005526003
R-HSA-8854691	Interleukin-20 family signaling	2	29	0,001888	0,00747851
R-HSA-5627083	RHO GTPases regulate CFTR trafficking	1	4	2,60E-04	0,017558127
R-HSA-9709957	Sensory Perception	11	1262	0,082178	0,022316193
R-HSA-2534343	Interaction With Cumulus Cells And The Zona Pellucida	1	12	7,81E-04	0,051768064

Table S3. The reactome pathway analysis of downregulated genes in both AS and MS datasets.

Pathway identifier	Pathway name	#Entities found	#Entities total	Entities ratio	Entities pValue
R-HSA-8850843	Phosphate bond hydrolysis by NTPDase proteins	1	8	6,85E-04	0,009547281
R-HSA-5661231	Metallothioneins bind metals	1	11	9,42E-04	0,013105637
R-HSA-8851680	Butyrophilin (BTN) family interactions	1	12	0,001027	0,014289116
R-HSA-5660526	Response to metal ions	1	14	0,001199	0,01665212
R-HSA-390522	Striated Muscle Contraction	1	36	0,003082	0,042300311
R-HSA-8956319	Nucleotide catabolism	1	38	0,003254	0,044600893