|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene symbol** | **CC-Patchy, n=5** | | | | | | | | | | **Pooled CC-diffuse, n=8/pooled normal controls, n=8** | **Function** |
| **Patient**  **1** | | **Patient**  **2** | | **Patient**  **3** | | **Patient**  **4** | | **Patient**  **5** | |
|  | I/U | I/P | I/U | I/P | I/U | I/P | I/U | I/P | I/U | I/P |  |  |
| **SELE** | 1.03 | 1.03 | -5.25 | 1.56 | 1.05 | 1.08 | 1.21 | 1.21 | 7.61 | 7.61 | 14.61 | Inflammatory cell recruitment |
| **SELPLG** | -1.20 | 1.38 | -1.71 | 1.23 | -1.03 | 2.18 | 1.66 | 1.88 | 1.68 | 1.50 | 1.89 | Inflammatory cell recruitment |
| **C2** | -1.01 | 2.20 | 1.10 | 2.21 | 1.08 | 2.51 | 2.05 | 2.92 | -1.33 | 2.17 | 2.39 | Complement |
| **C4A/B** | 1.82 | 3.35 | 1.27 | 4.04 | 1.16 | 6.21 | 2.24 | 2.43 | -1.36 | 1.54 | 2.73 | Complement |
| **C4BPA** | 2.63 | 5.64 | 14.98 | 1.16 | -1.34 | 1.06 | 24.9 | 1.85 | -10.6 | 1.95 | 2.00 | Complement |
| **C9** | -1.63 | 2.47 | 1.93 | 4.40 | -4.86 | -1.80 | -1.53 | 1.52 | 3.16 | 7.45 | 3.56 | Complement |
| **IL1A** | 37.92 | 37.92 | -1.22 | 1.56 | 7.79 | 7.56 | 10.4 | 10.4 | 1.60 | 10.42 | 5.09 | Interleukin |
| **IL1B** | 1.33 | 5.17 | -2.16 | 1.96 | 1.22 | 2.13 | 2.89 | 6.58 | 1.60 | 6.59 | 7.66 | Interleukin |
| **IL1RN** | 1.23 | 1.92 | -26.0 | -13.4 | -1.60 | 1.88 | 49.1 | 2.35 | -1.54 | -1.30 | 3.94 | Interleukin |
| **IL11** | -2.90 | -1.08 | 1.16 | 3.07 | -1.31 | 1.65 | -1.91 | -1.32 | 1.65 | 1.55 | 3.29 | Interleukin |
| **IL15** | -1.09 | 1.43 | -1.07 | 1.66 | -1.13 | 1.73 | .125 | 1.70 | 1.12 | 1.82 | 1.64 | Interleukin |
| **IL19** | 1.03 | -1.50 | 1.49 | 1.01 | 1.05 | -1.43 | 1.21 | -1.28 | 10.99 | 26.68 | -1.55 | Interleukin |
| **IL20** | -2.31 | -5.06 | 1.54 | -3.24 | 6.51 | 1.28 | 1.99 | -2.63 | 1.05 | -4.90 | -5.22 | Interleukin |
| **IL21** | 1.38 | 2.47 | -1.40 | 1.75 | -1.57 | 1.38 | 3.31 | 2.40 | 1.74 | 4.49 | 2.15 | Interleukin |
| **IL26** | -1.21 | 4.36 | -1.46 | -1.27 | 1.28 | 2.74 | 43.0 | 5.39 | 1.15 | 2.13 | 4.10 | Interleukin |
| **IL1RL1** | -1.04 | 1.62 | 1.14 | 2.36 | 1.21 | 3.23 | 2.49 | 3.50 | 1.09 | 1.49 | 2.90 | Interleukin  receptor |
| **IL1RN** | 1.32 | 1.63 | -2.09 | -1.44 | -1.71 | 1.66 | 6.21 | 2.53 | -1.15 | 1.38 | 2.77 | Interleukin  receptor |
| **IL2RA** | -1.03 | 2.43 | -2.30 | 1.29 | 1.13 | 3.97 | 9.42 | 5.28 | -1.17 | 2.41 | 3.55 | Interleukin  receptor |
| **IL2RB** | 1.15 | 2.69 | -1.46 | 1.93 | 1.18 | 3.44 | 2.19 | 3.12 | 1.03 | 2.70 | 2.45 | Interleukin  receptor |
| **IL18R1** | 1.13 | 1.71 | -1.22 | 1.38 | -1.09 | 2.24 | 2.05 | 2.48 | 1.08 | 1.52 | 1.83 | Interleukin  receptor |
| **IL21R** | 1.17 | 2.08 | 2.02 | 1.65 | 1.12 | 2.10 | 3.42 | 3.47 | 1.14 | 2.35 | 2.24 | Interleukin  receptor |
| **IL23R** | -1.05 | -1.24 | -1.28 | -1.76 | -1.02 | -1.20 | -1.37 | 1.30 | -1.19 | -1.49 | -1.53 | Interleukin  receptor |
| **DEFA1** | -5.06 | -1.61 | 5.79 | 4.40 | 4.95 | 2.77 | 1.01 | 1.74 | 3.11 | 5.56 | 3.56 | Defensin |
| **DEFB4A** | 12.11 | 12.11 | 1.49 | 1.56 | -1.12 | 8.87 | 1.21 | 1.21 | -16.5 | 1.00 | 7.00 | Defensin |
| **DEFB1** | 1.17 | -5.71 | -1.07 | -1.26 | 1.00 | -2.46 | -2.31 | -2.10 | -1.07 | -1.90 | -3.88 | Defensin |
| **GZMA** | -1.23 | 1.91 | -1.01 | 1.54 | 1.07 | 4.09 | 1.16 | 1.94 | -1.56 | 1.50 | 1.58 | Granzyme |
| **GZMB** | 1.14 | 6.60 | 1.58 | 2.39 | 1.13 | 3.28 | 7.46 | 7.93 | -1.41 | 5.39 | 6.56 | Granzyme |
| **GZMK** | -1.02 | 1.40 | -1.75 | 3.17 | -1.08 | 1.17 | 4.96 | 4.40 | -1.09 | 2.30 | 1.93 | Granzyme |
| **HLA-A** | -1.12 | 1.97 | 1.13 | 1.84 | -1.05 | 1.89 | 2.27 | 1.90 | 1.01 | 1.90 | 1.62 | MHC I |
| **HLA-B** | 1.00 | 2.01 | 1.12 | 2.17 | 1.02 | 2.03 | 2.53 | 2.22 | -1.09 | 1.92 | 1.92 | MHC I |
| **HLA-C** | 1.02 | 2.59 | 1.19 | -1.08 | 1.01 | 1.59 | 2.01 | 1.30 | 1.03 | 2.56 | 2.05 | MHC I |
| **HLA-DMA** | 1.17 | 3.13 | 1.09 | 2.37 | 1.01 | 2.48 | 1.93 | 3.12 | -1.06 | 2.71 | 2.24 | MHC II |
| **HLA-DMB** | 1.14 | 2.35 | -1.14 | 1.54 | -1.03 | 2.11 | 2.11 | 2.97 | -1.23 | 1.73 | 1.63 | MHC II |
| **HLA-DQB1** | 1.14 | 5.75 | 1.49 | -412 | 1.06 | 3.59 | 1.48 | 5.48 | 1 | -644 | 1.98 | MHC II |
| **HLA-DRA** | 1.14 | 2.48 | -1.24 | 1.26 | 1.01 | 1.99 | 1.91 | 2.87 | -1.30 | 1.62 | 1.83 | MHC II |
| **HLA-DRB3** | 1.06 | 2.41 | 1.12 | 1.97 | -1.07 | 2.39 | 1.82 | 2.82 | 1.22 | 2.86 | 2.10 | MHC II |
| **XBP1** | 1.70 | 2.26 | 1.36 | 2.63 | -1.01 | 1.79 | 1.96 | 2.17 | -1.01 | 3.12 | 2.99 | Transcription factor for MHC II |
| **CLEC4E** | -1.37 | 12.11 | -1.20 | 2.78 | -1.55 | 9.32 | 29.8 | 8.79 | 1.36 | 20.20 | 21.18 | C-type Lectin  Domain family |
| **CLEC5A** | 1.17 | 12.86 | 3.44 | 12.41 | 2.73 | 7.54 | 37.0 | 15.0 | -1.76 | 4.22 | 9.01 | C-type Lectin  Domain family |
| **CLEC6A** | -1.08 | 3.85 | 3.04 | 3.18 | 1.05 | 1.08 | 3.20 | 3.20 | 1.00 | -8.32 | 4.14 | C-type Lectin  Domain family |
| **KLRG1** | -1.09 | 1.61 | -1.19 | 3.04 | -1.24 | 1.32 | 2.38 | 2.99 | -1.01 | 1.50 | 1.54 | Killer cell Lectin-like receptor |
| **KLRC4** | -1.10 | 2.06 | -1.27 | 1.57 | 1.02 | 2.83 | 3.08 | 2.09 | -1.41 | 1.47 | 1.87 | Killer cell Lectin-like receptor |
| **KLRD1** | 1.52 | 2.96 | -1.51 | 1.88 | -1.01 | 2.81 | 2.86 | 3.00 | -1.62 | 1.29 | 1.90 | Killer cell Lectin-like receptor |
| **KLRF1** | 1.30 | -1.02 | 1.17 | -2.68 | 1.96 | -1.33 | -1.34 | 1.51 | -1.14 | -2.47 | -2.87 | Killer cell Lectin-like receptor |
| **KLRF2** | 1.03 | -4.17 | 1.49 | -2.76 | 5.46 | 1.31 | -19.1 | -3.57 | 1.00 | -4.31 | -4.31 | Killer cell Lectin-like receptor |
| **KLRG1** | -1.09 | 1.61 | -1.19 | 3.04 | -1.24 | 1.32 | 2.38 | 2.99 | -1.01 | 1.50 | 1.54 | Killer cell Lectin-like receptor |
| **KLRK1** | -1.02 | 1.94 | 1.51 | 1.69 | 1.05 | 2.44 | 3.90 | 2.67 | -1.20 | 1.46 | 1.66 | Killer cell Lectin-like receptor |
| **CTLA4-TM** | 1.30 | 2.62 | -2.56 | 1.67 | 1.00 | 3.70 | 6.81 | 4.82 | 1.52 | 4.63 | 3.40 | Regulatory T cells |
| **CTLA4-all** | 1.47 | 3.87 | -1.68 | 3.47 | -1.19 | 4.43 | 7.27 | 7.38 | 1.81 | 7.48 | 5.23 | Regulatory T cells |
| **S100A8** | 2.09 | 8.67 | 1.03 | 2.64 | 1.87 | 4.88 | 1.99 | 10.80 | -2.77 | 6.64 | 15.56 | Inflammation and immune response |
| **S100A9** | 1.36 | 4.56 | 1.37 | 1.82 | 1.04 | 1.77 | 2.10 | 6.90 | -2.83 | 2.67 | 5.00 | Inflammation and immune response |

**Supplemental Table 5.** **Additional genes differentially expressed (up- or down-regulated greater than 1.5-fold) in collagenous colitis by NanoString nCounter gene expression assay. The gene expression was not confirmed by qRT-PCR.** Data represent the fold changes (FC) of gene expression in involved mucosa or pooled CC samples compared with pooled normal colonic controls. The corresponding FC between histologically involved and uninvolved mucosa from 5 CC patients are listed for comparison. I/U, involved mucosa vs. uninvolved mucosa; I/P, involved mucosa vs. pooled normal colonic controls. Positive FC indicates upregulation and negative FC indicates downregulation.