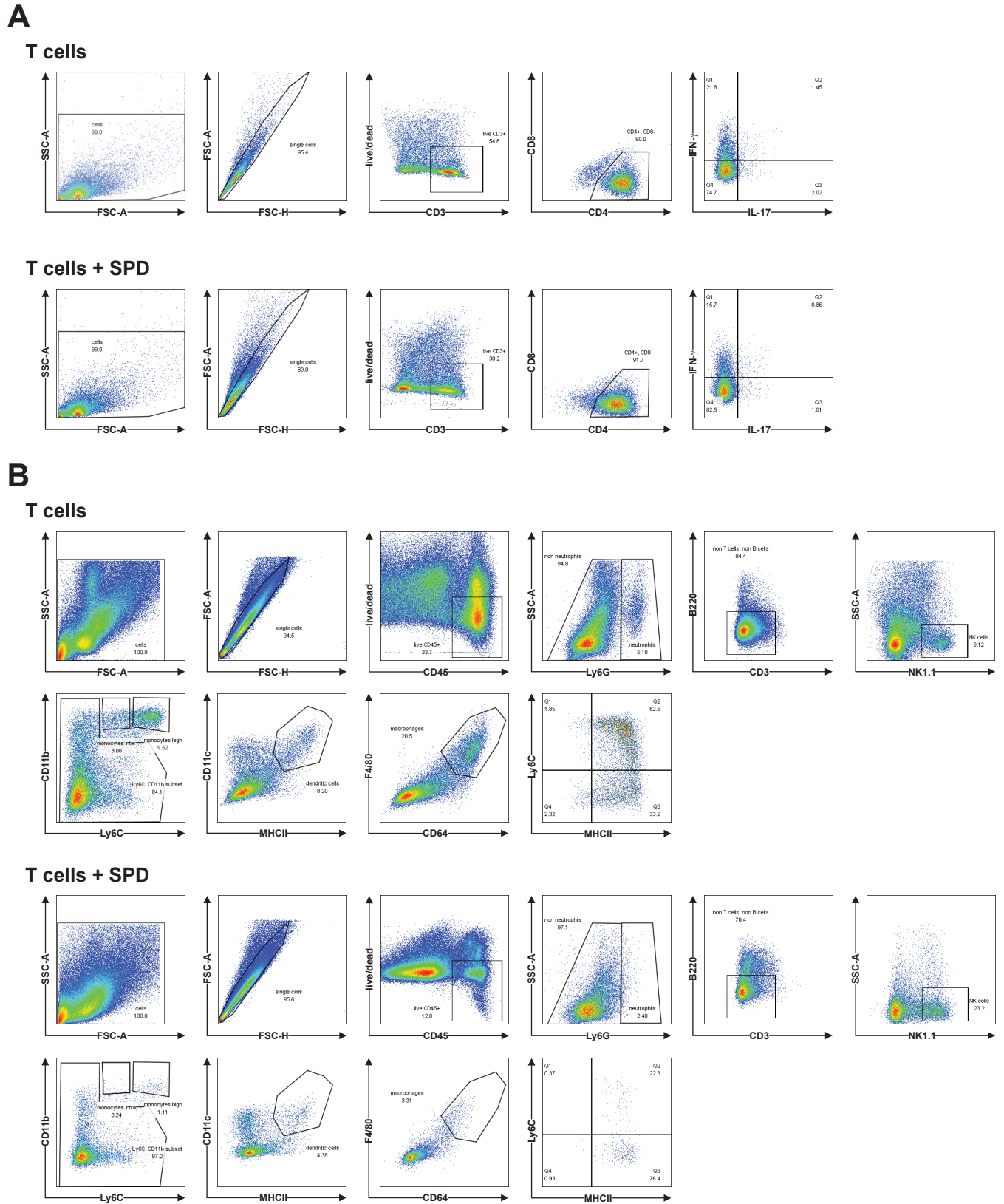
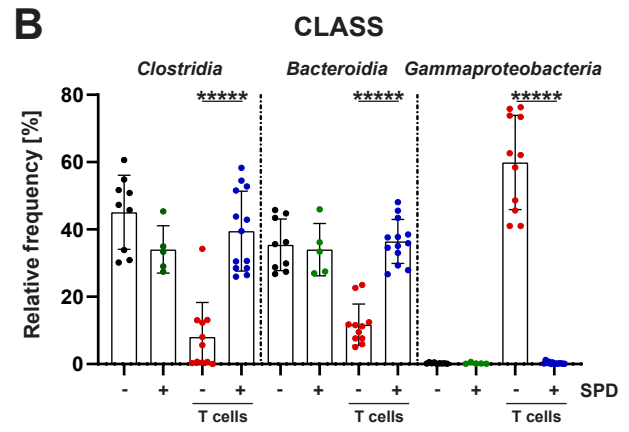
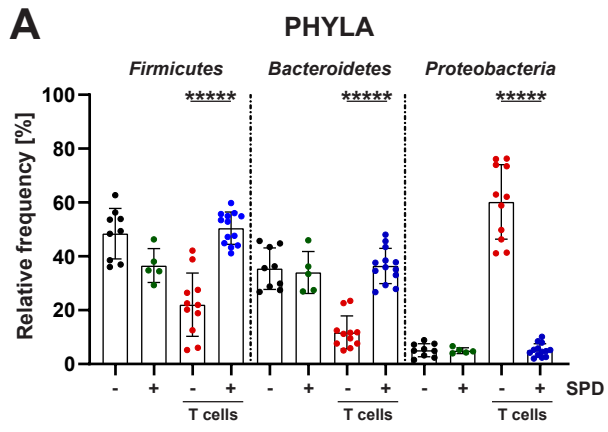


Supplementary figure 1

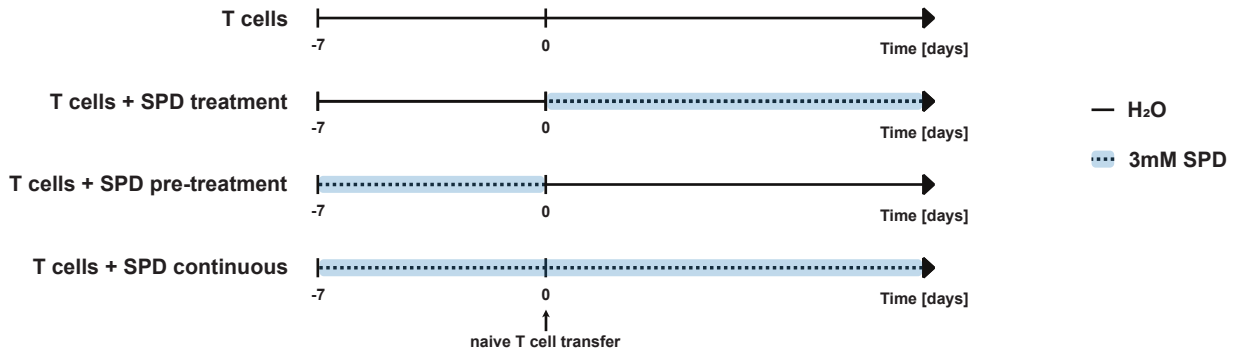


Supplementary figure 2

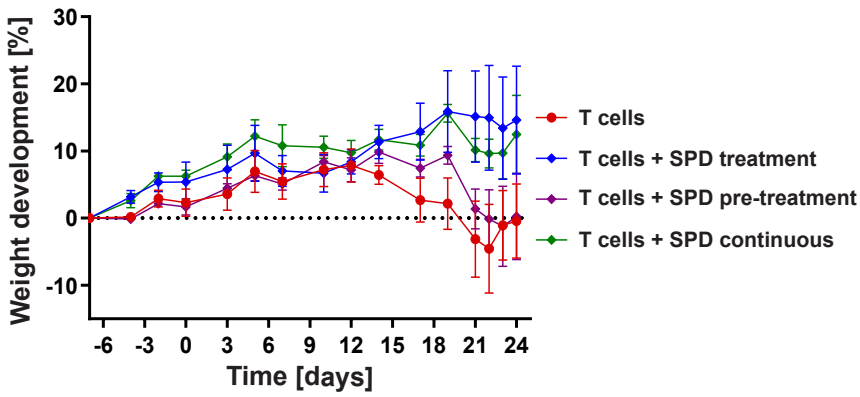


Supplementary figure 3

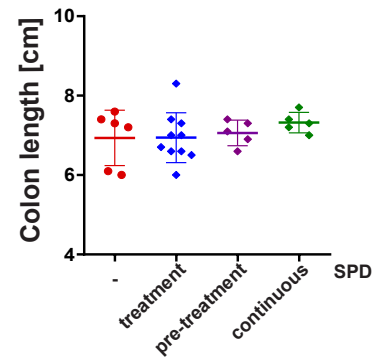
A



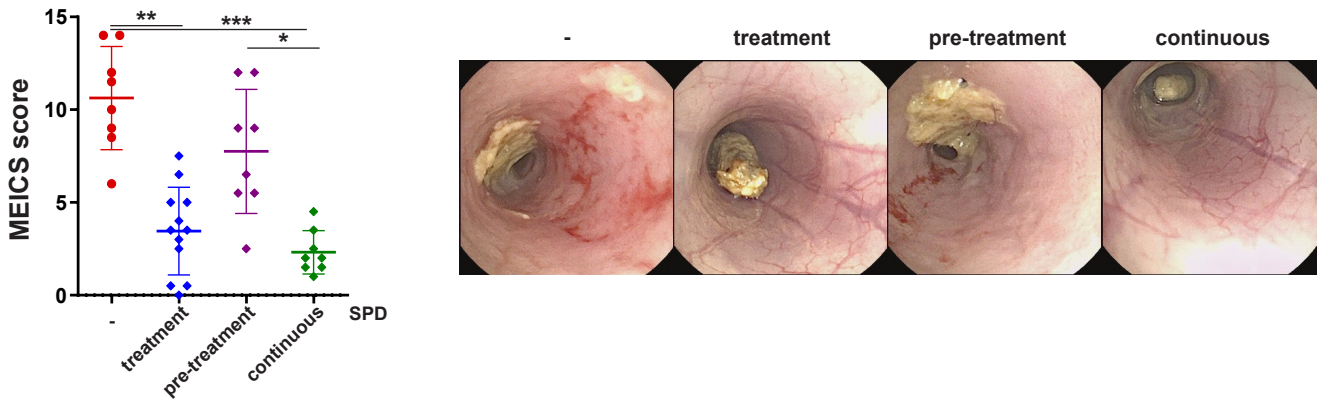
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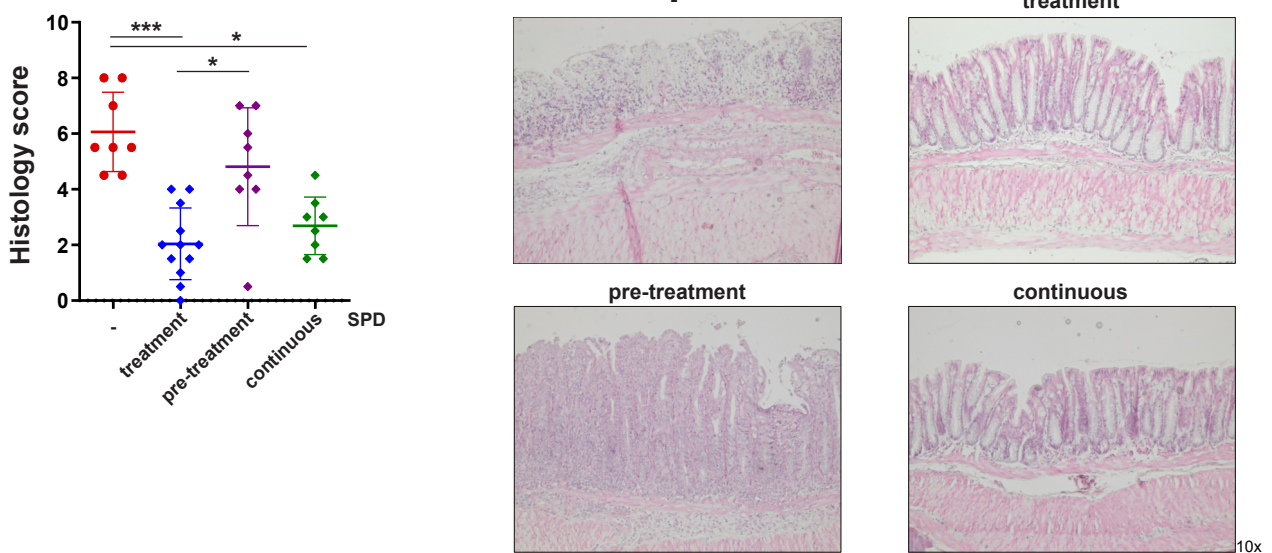
E



C

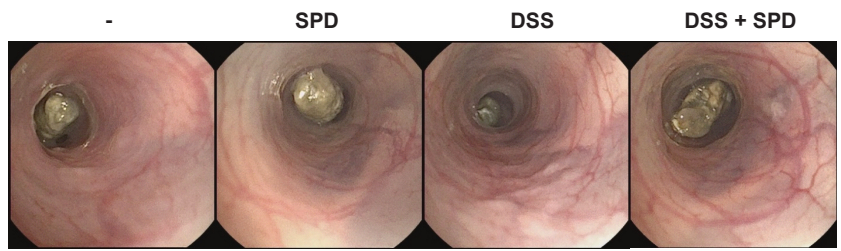
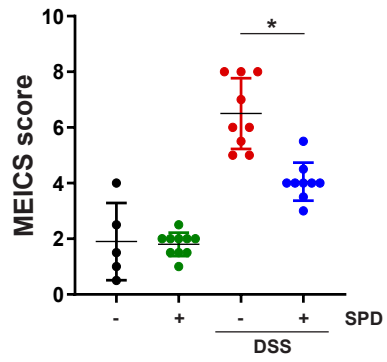


D

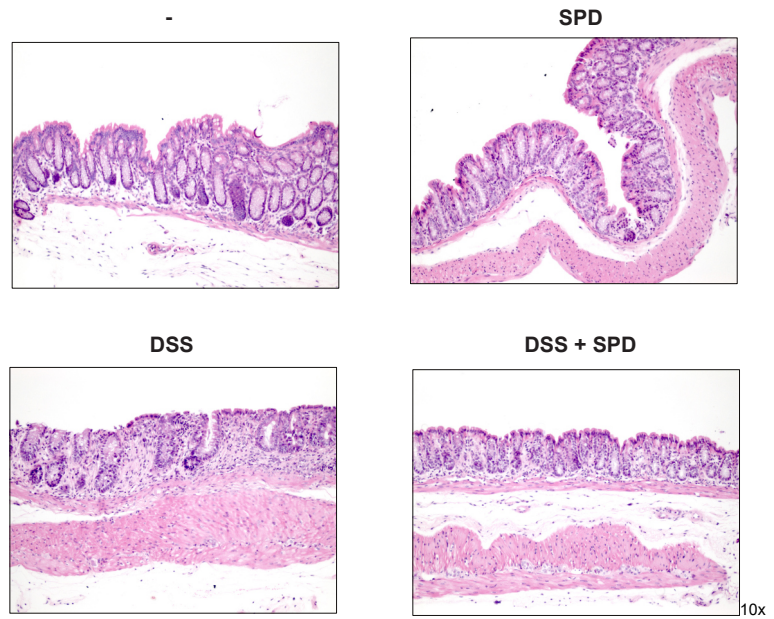
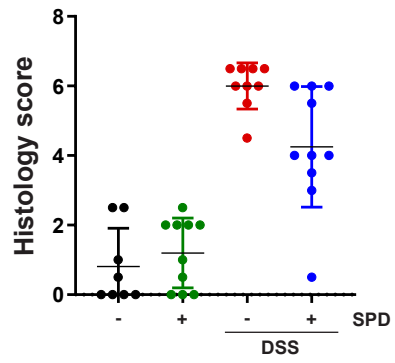


Supplementary figure 4

A

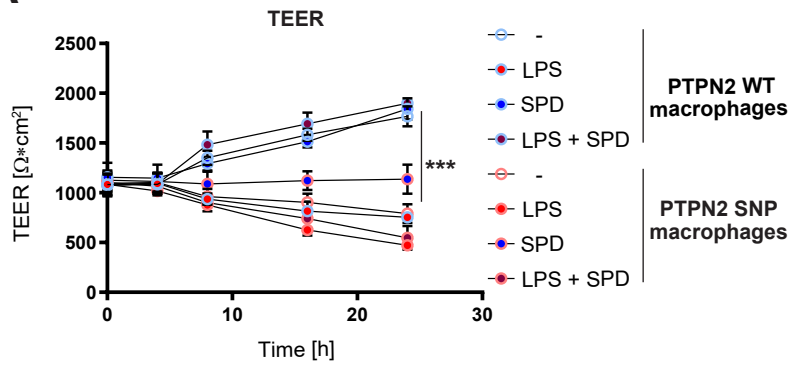


B

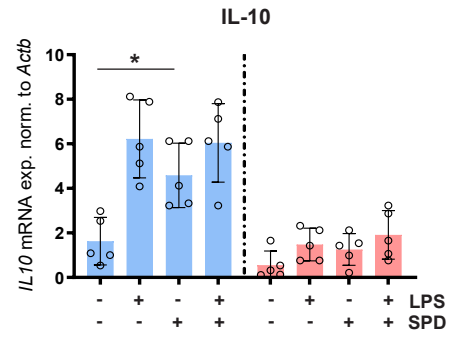


Supplementary figure 5

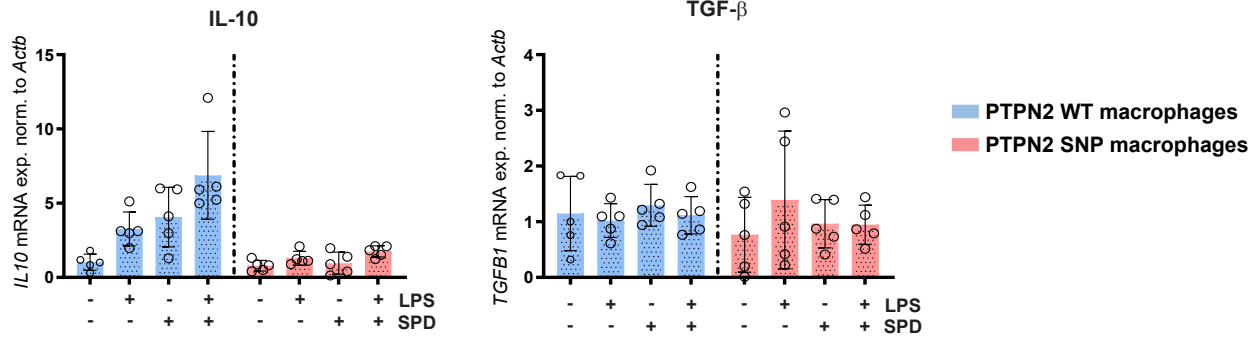
A



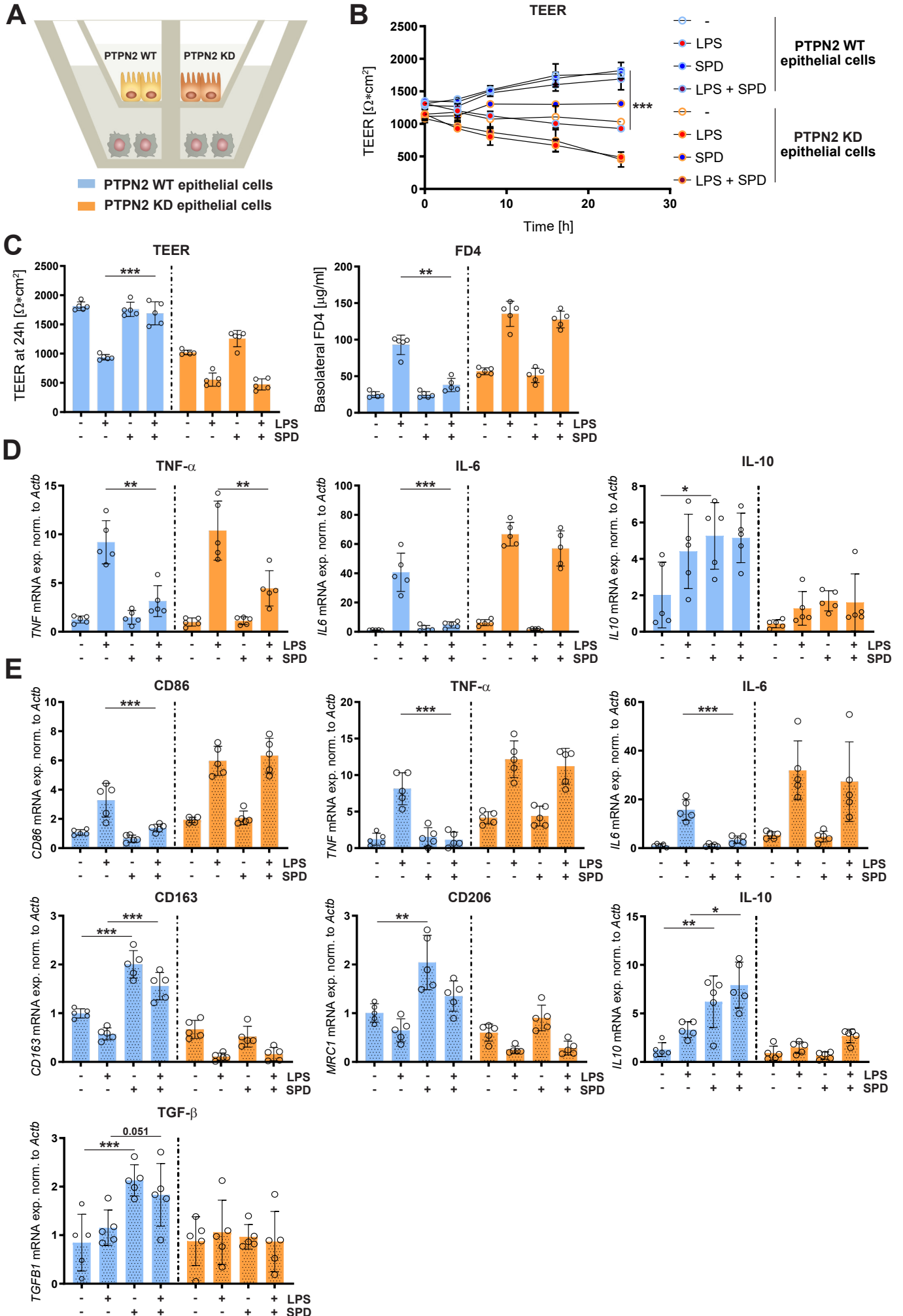
B



C



Supplementary figure 6



Supplementary table I

| taxonomic rank | operational taxonomic unit (OTU) | difference in mean level | adjusted p value |
|---|----------------------------------|--------------------------------------|----------------------------|
| PHYLUM | <i>Actinobacteria</i> | 12.45 | 0.02275 |
| | <i>Bacteroidetes</i> | 20.00 | 3.83474 x 10 ⁻⁷ |
| | <i>Cyanobacteria</i> | 12.37 | 7.32875 x 10 ⁻⁵ |
| | <i>Deferribacteres</i> | 4.34 | 0.75131 |
| | <i>Epsilonbacteraeota</i> | 1.91 | 0.00300 |
| | <i>Firmicutes</i> | 20.17 | 1.85046 x 10 ⁻⁷ |
| | <i>Patescibacteria</i> | 15.27 | 2.15756 x 10 ⁻⁵ |
| | <i>Proteobacteria</i> | 19.08 | 1.14341 x 10 ⁻⁶ |
| | <i>Tenericutes</i> | 14.85 | 4.40553 x 10 ⁻⁵ |
| | <i>Verrucomicrobia</i> | 5.56 | 0.33985 |
| | <i>Eukaryota</i> | 0.19 | 0.97817 |
| | <i>Unassigned</i> | 4.15 | 0.00032 |
| | CLASS | <i>Actinobacteria Actinobacteria</i> | 0.08 |
| <i>Actinobacteria Coriobacteriia</i> | | 12.45 | 0.02275 |
| <i>Bacteroidetes Bacteroidia</i> | | 20.00 | 3.83474 x 10 ⁻⁷ |
| <i>Cyanobacteria Melainabacteria</i> | | 12.29 | 7.88581 x 10 ⁻⁵ |
| <i>Cyanobacteria Oxyphotobacteria</i> | | 0.07 | 0.66806 |
| <i>Deferribacteres Deferribacteres</i> | | 4.34 | 0.75131 |
| <i>Epsilonbacteraeota Campylobacteria</i> | | 1.91 | 0.00300 |
| <i>Firmicutes Bacilli</i> | | 12.52 | 0.00336 |
| <i>Firmicutes Clostridia</i> | | 16.37 | 4.26063 x 10 ⁻⁵ |
| <i>Firmicutes Erysipelotrichia</i> | | 3.90 | 0.83060 |
| <i>Firmicutes Negativicutes</i> | | 0.09 | 0.53414 |
| <i>Patescibacteria Saccharimonadia</i> | | 15.27 | 2.15756 x 10 ⁻⁵ |
| <i>Proteobacteria Alphaproteobacteria</i> | | 9.59 | 0.02797 |
| <i>Proteobacteria Deltaproteobacteria</i> | | 14.89 | 0.00164 |
| <i>Proteobacteria Gammaproteobacteria</i> | | 19.08 | 1.15349 x 10 ⁻⁶ |
| <i>Tenericutes Mollicutes</i> | | 14.85 | 4.40553 x 10 ⁻⁵ |
| <i>Verrucomicrobia Verrucomicrobiae</i> | | 5.56 | 0.33985 |
| <i>Eukaryota</i> | | 0.19 | 0.97817 |
| <i>Unassigned</i> | 4.15 | 0.00032 | |

Supplementary table II

| No. | PTPN2 genotype | Disease | State of disease | Sex | Age | Medication |
|-----|----------------|------------------|------------------|-----|-----|--------------------------------|
| 1 | TT (wild type) | Colitis Ulcerosa | Remission | M | 59 | no treatment |
| 2 | TT (wild type) | Crohn's Disease | Active | M | 40 | Infliximab |
| 3 | TT (wild type) | Colitis Ulcerosa | Active | M | 39 | Vedolizumab |
| 4 | TT (wild type) | Crohn's Disease | Active | M | 48 | Vedolizumab |
| 5 | TT (wild type) | Colitis Ulcerosa | Active | W | 53 | Infliximab, Mesalazin |
| 6 | CT (SNP) | Crohn's Disease | Active | M | 63 | Budenofalk, Adalimumab |
| 7 | CT (SNP) | Crohn's Disease | Active | M | 45 | Budenofalk, Cetrolizumab pegol |
| 8 | CT (SNP) | Colitis Ulcerosa | Active | W | 35 | Vedolizumab, Mesalazin |
| 9 | CT (SNP) | Colitis Ulcerosa | Remission | M | 45 | Mesalazin |
| 10 | CT (SNP) | Colitis Ulcerosa | Active | M | 46 | Infliximab |