

## Supplementary Information

**Table S1.** Chromatographic conditions for HPLC analysis.

| Parameter          | HPLC conditions                                       |
|--------------------|-------------------------------------------------------|
| Column             | Diamonsil C18 column (5 $\mu$ m, 4.6 $\times$ 250 mm) |
| Column temperature | 35 $^{\circ}$ C                                       |
| Mobile phase A     | 0.1% formic acid in water                             |
| Mobile phase B     | Acetonitrile                                          |
| Gradient program   | 0–3 min, 90% A                                        |
|                    | 3–48 min, 90%–0% A                                    |
|                    | 48–53 min, 0%–100% B                                  |
|                    | 53–60 min, 100%–90% B                                 |
| Flow rate          | 1.0 mL/min                                            |
| Injection volume   | 10 $\mu$ L                                            |

**Table S2.** Disease activity index (DAI) scoring criteria.

| Scores | Weight loss (%) | Stool consistency | Fecal occult blood test |
|--------|-----------------|-------------------|-------------------------|
| 0      | <1              | Normal            | Negative                |
| 1      | 1~5             | Loose             | Light blue              |
| 2      | 5~10            | Soft but formed   | Blue                    |
| 3      | 10~15           | Mucoid stool      | Dark blue               |
| 4      | >20             | Watery diarrhea   | Gross bleed             |

**Table S3.** Pathological scores.

| Score | Inflammation severity | Inflammation extent   | Crypt damage            |
|-------|-----------------------|-----------------------|-------------------------|
| 0     | None                  | None                  | None                    |
| 1     | Mild                  | Mucous layer          | 1/3                     |
| 2     | Moderate              | Submucosa             | 2/3                     |
| 3     | Severe                | Muscularis and serosa | 100 %                   |
| 4     | —                     | —                     | 100 % + epithelium loss |

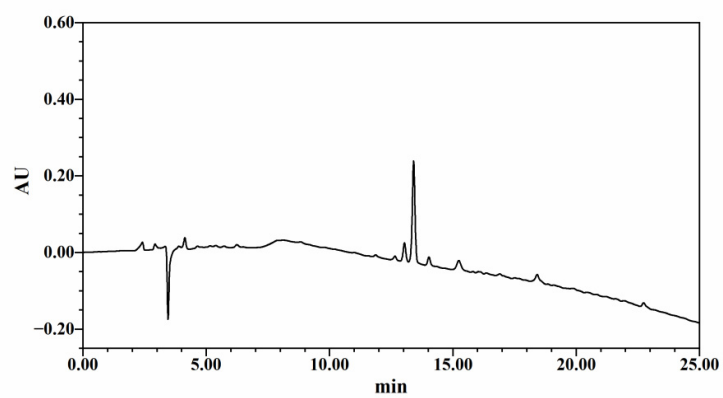
**Table S4.** Primer sequence of qRT-PCR gene.

| Gene          | Primer         | Sequence                        |
|---------------|----------------|---------------------------------|
| GAPDH         | Forward Primer | 5'-AGGAGCGAGACCCCACTAACATCAA-3' |
|               | Reverse Primer | 5'-ATGGGGGCATCGGCAGAAGGGGCGG-3' |
| TNF- $\alpha$ | Forward Primer | 5'-AGCAGAAGCTCCCTCAGCGA-3'      |
|               | Reverse Primer | 5'-TCACATTTCTTTTCCAAGCGATCTT-3' |
| IL-6          | Forward Primer | 5'-CTCCCAACAGACCTGTCTATAC-3'    |
|               | Reverse Primer | 5'-CCATTGCACAACTCTTTTCTCA-3'    |
| IL-1 $\beta$  | Forward Primer | 5'-GCCAGTGAAATGATGGCTTAGG-3'    |
|               | Reverse Primer | 5'-AGGAGCACTTCATCTGTTTAGG-3'    |

**Table S5.** Elemental composition of melanin from IOM.

| Elements (%) | IOM    |
|--------------|--------|
| C            | 60.965 |
| H            | 4.850  |
| N            | 0.105  |
| S            | 0.095  |
| O            | 33.985 |

$$O\% = 100\% - C\% - H\% - N\% - S\%$$



**Figure S1.** HPLC chromatogram.