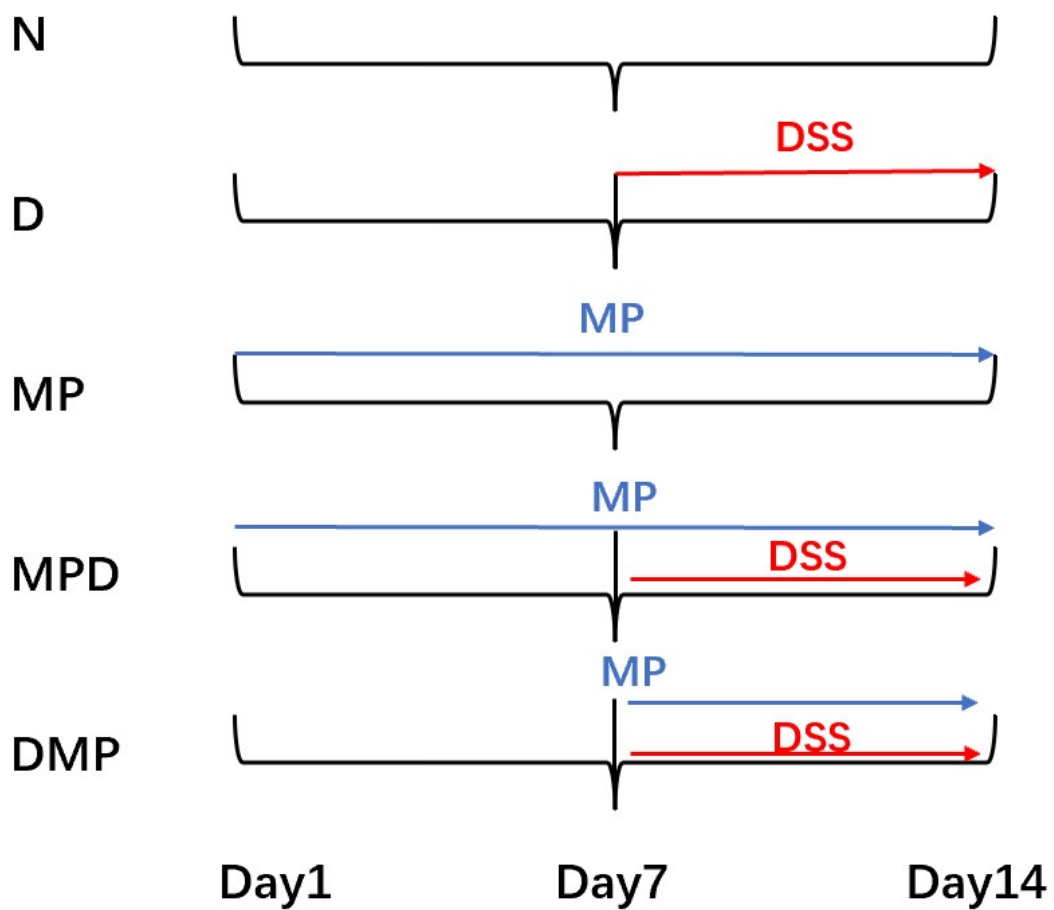
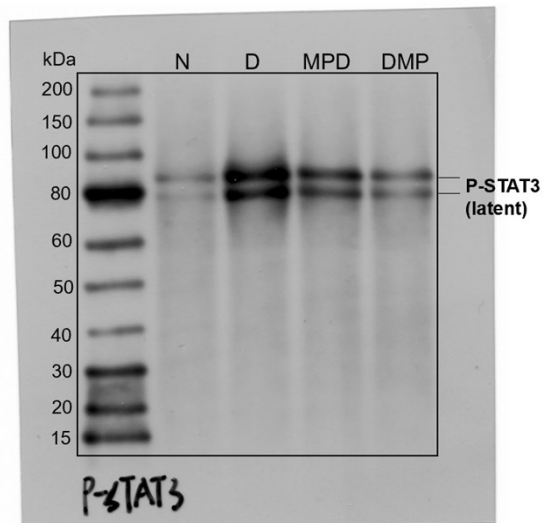
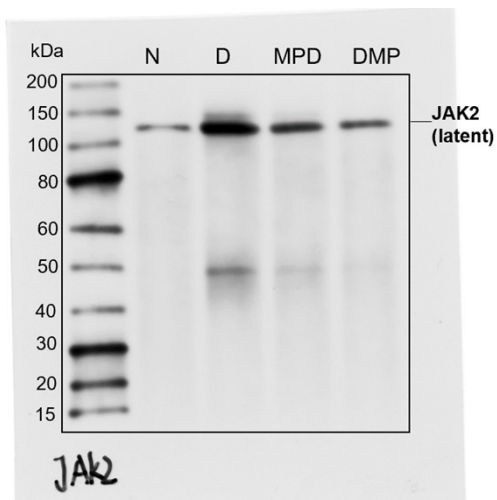
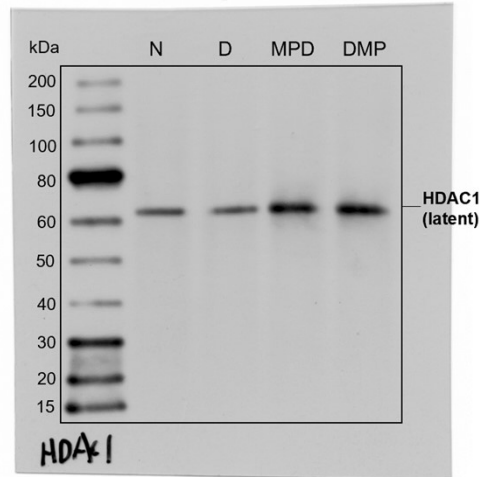
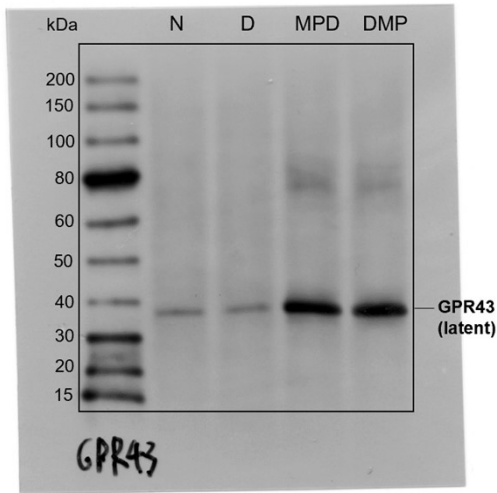
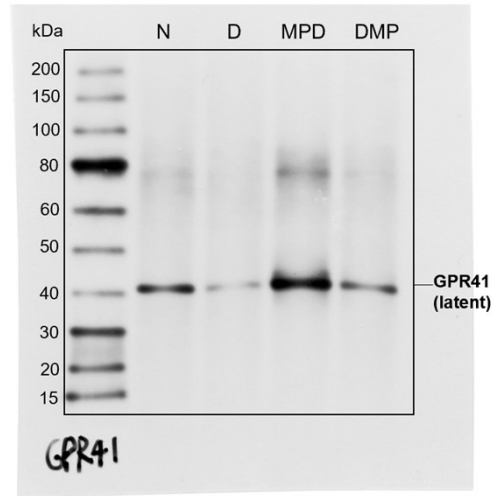
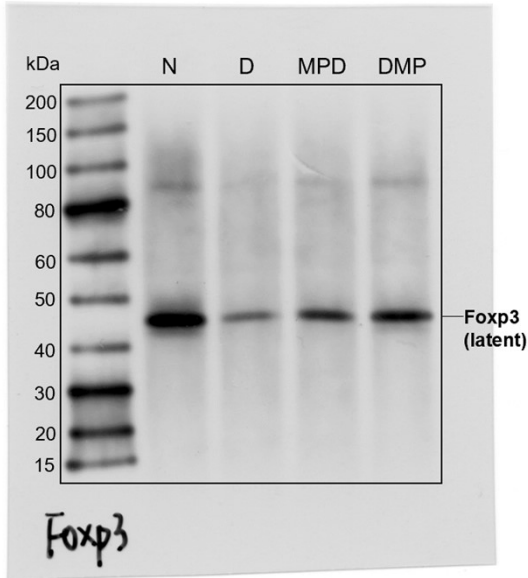


## Electronic Supplementary Information

(For Main Article)



**Figure S1.** Experimental design of the MCP on DSS-induced mouse colitis.



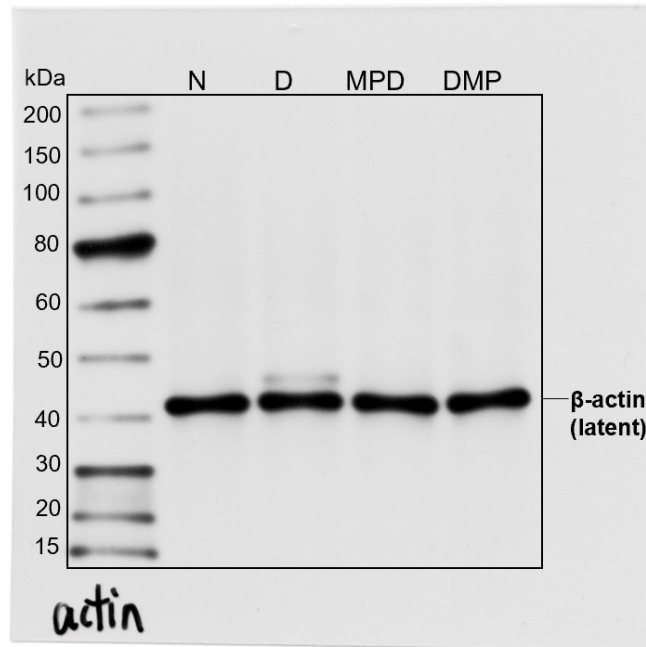
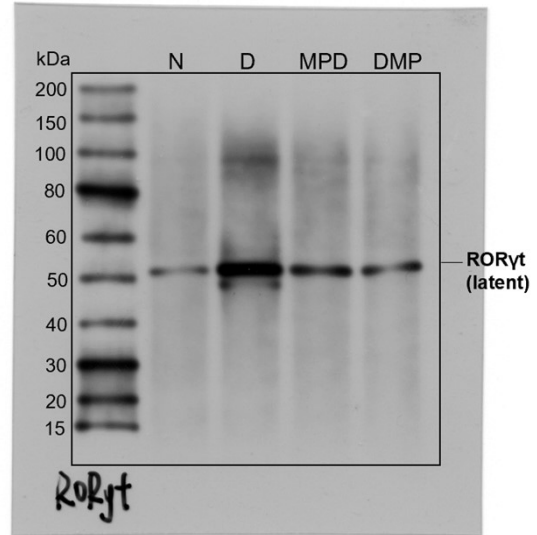
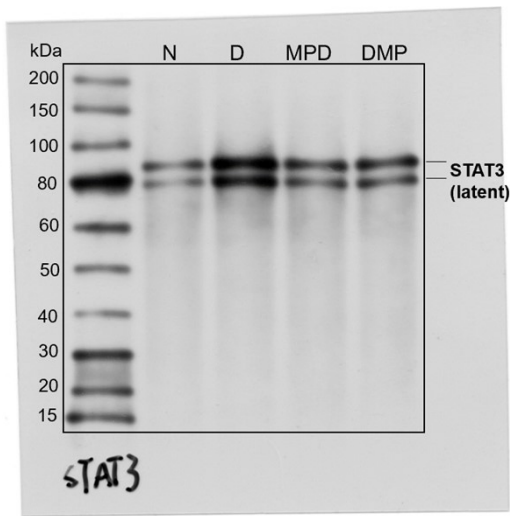


Figure S2 The underlying raw images by Western Blot

**Table S1** Scoring standard of disease activity index

Scores	Weight loss (%)	Feces status	Bloody stools
0	No loss	Normal	No blood (No color within 2min)
1	0-10	Loose stool (not attached to the anus)	Presence (Within 1- 2 min, fuchsia)
2	11-15	Loose stool (attach to the anus)	Presence (Within 1 min, fuchsia)
3	16-20	Diarrhea (liquid)	Presence (Within 10 sec, purplish blue)
4	>20	Severe diarrhea	Gross blood (Instantly purplish blue)

**Table S2** Histopathology Grading System for Colonic Sections

Feature graded	Grade	Description
Inflammation	0	normal
	1	minimal infiltration of lamina propria, focal to multifocal
	2	mild infiltration of lamina propria, multifocal, mild gland separation
	3	moderate to mixed infiltration, multifocal with minimal edema
	4	marked mixed infiltration into submucosa and lamina propria with extensive areas of gland separation, enlarged Peyer's patches, edema
Epithelium	0	normal
	1	minimal: focal mucosal hyperplasia
	2	mild: multifocal tufting of rafts of epithelial cells with increased numbers of goblet cells
	3	moderate: multifocal to locally extensive epithelial attenuation or erosion with goblet cell hyperplasia
	4	marked: locally extensive to subtotal erosion or ulceration
Glands	0	normal
	1	minimal: rare gland dilatation
	2	mild: multifocal gland dilatation
	3	moderate: multifocal gland dilatation with abscessation and occasional loss of glands
Depth of lesion	0	none
	1	mucosa
	2	mucosa and submucosa
	3	transmural
Extent of section affected	0	none
	1	minimal: <10%
	2	mild: 10–25%
	3	moderate: 26–50%
	4	marked: >50%

**Table S3** Determination of basic components of Maca protein

	Protein content (g/kg)	Total sugar content (g/kg)	Total phenol content (g/ kg)	Moisture content (g/kg)	Ash content (g/kg)
MP	879.31 ± 7.12	45.08 ± 0.31	10.02 ± 0.38	62.16 ± 0.95	3.66 ± 0.09

**Table S4** The amino acid composition and content of major individual phenols of Maca protein

Amino acid composition	Content (mg/g)	Major individual phenols	Content ( $\mu\text{g/g}$ )
EAA		Gallic acid	2.48
Ile	6.72	Benzoic acid	3.96
Leu	39.24	Catechin	90.8
Met	17.25	Vanillic acid	6.71
Val	22.28	Caffeic acid	nd
Phe	23.11	Syringic acid	nd
Thr	75.19	Epicatechin	10.33
Lys	23.35	Coumaric acid	13.01
NEAA		Rutin	nd
Ala	29.06	Salicylic acid	nd
Arg	116.92	Coumarin	3.22
Asp	48.13	Resveratrol	3.74
Glu	149.85	Morin	nd
Gly	29.17	Quercetin	28.02
His	15.23	Hesperetin	nd
Pro	129.20	Ferulic acid	nd
Ser	42.06	Chlorogenic acid	12.15
Tyr	19.40	Kaempferic acid	nd
Cys	96.30		