Insight into the underlying mechanism of functional *Pediococcus acidilactici* SWU-HX39 in alleviating hyperuricemia

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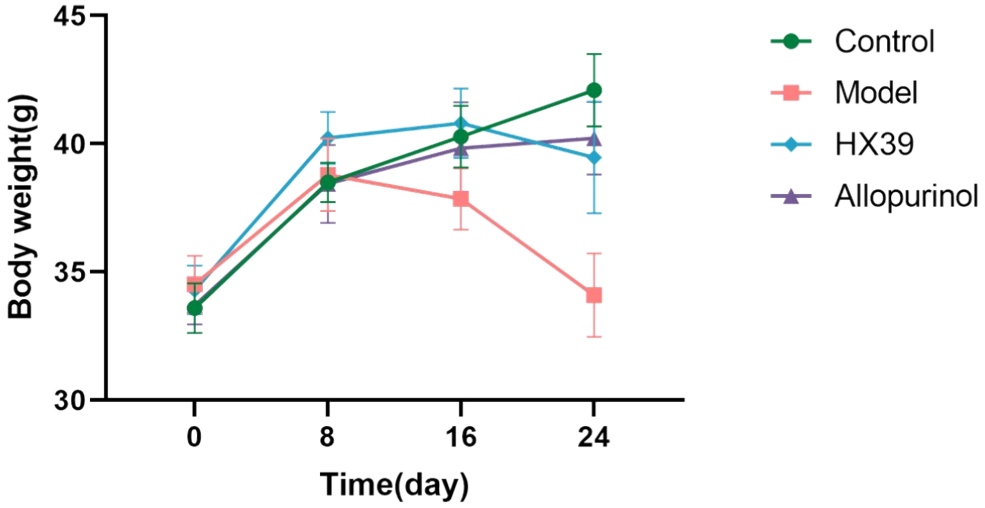

Fig. S1 Experimental group design and weight change of mice during intervention

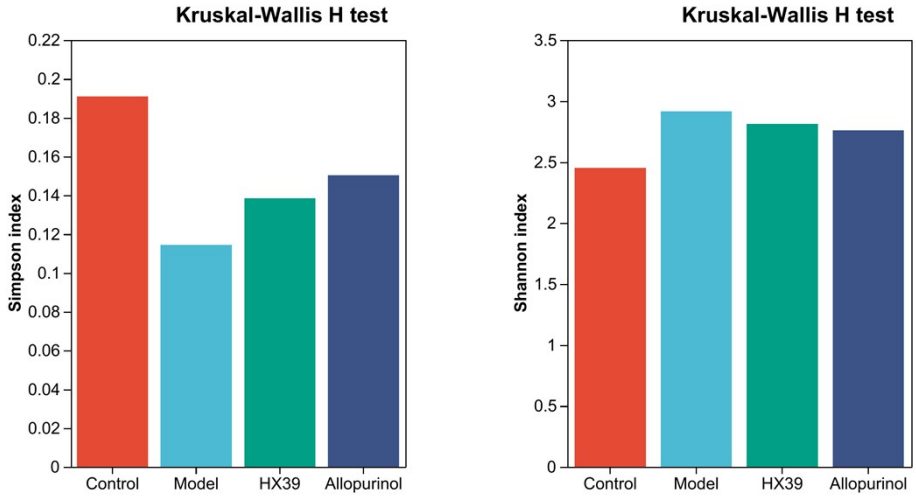

Fig. S2 Alpha diversity index (a) Simpson index analysis; (b) Shannon index analysis

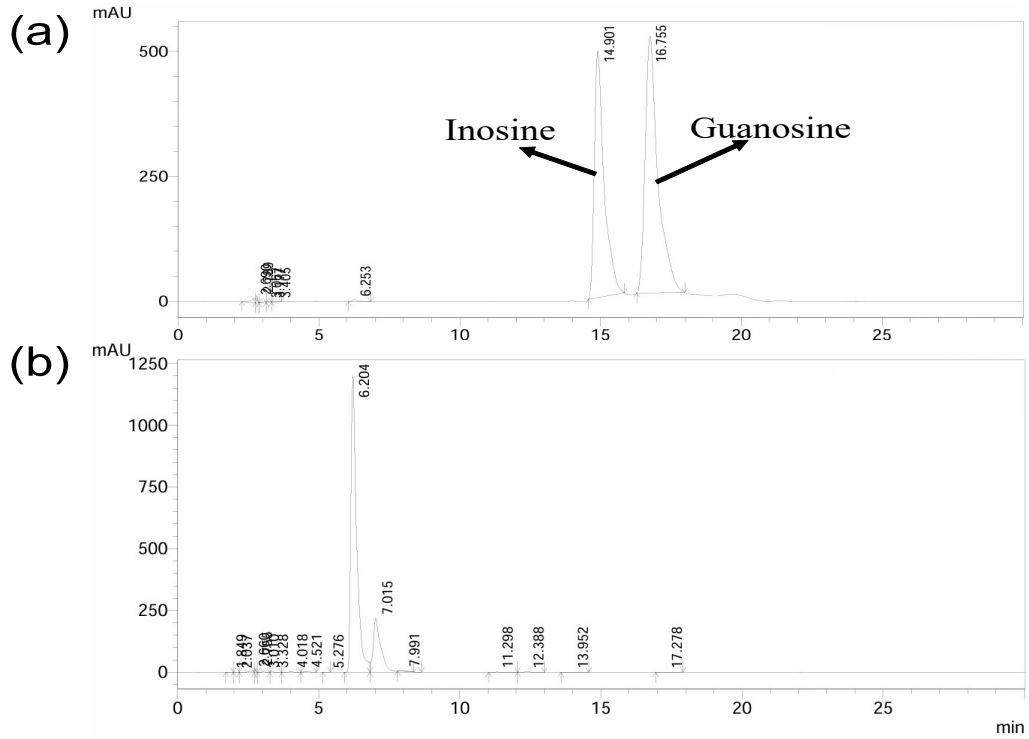

Fig. S3 HPLC-UV determination of the ability of strains to degrade inosine and guanosine: (a) inosine-guanosine-neutral phosphate buffer solution (1.26 mmol/L inosine-1.26 mmol/L guanosine); (b) HX39 resuspended in 750μL inosine-guanosine-neutral phosphate buffer solution and incubated at 37℃ for 120 min.

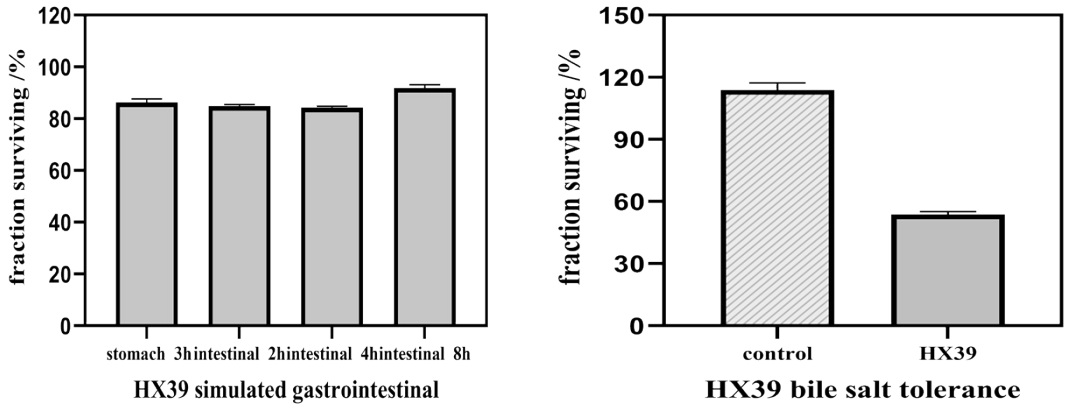

Fig. S4 HX39 Probiotic potential assessment (a) gastrointestinal tolerance; (b) growth rate in 0.3% bile salt.

Table S1 Assessment of ex vivo uric acid reduction ability

Assessment of ex vivo uric acid reduction ability	
Inosine degradation rate	95.86%±0.54%
Guanosine degradation rate	91.24%±1.79%
Inhibition rate of xanthine oxidase	63.15%±1.46%

Table S2 HX39 safety assessment-antibiotic resistance

Probiotic number	Sulfamethoxazole	Chloramphenicol	Lincomycin	Ciprofloxacin	Erythromycin	Tetracycline	Gentamicin	Ceftriaxone	Ampicillin	Penicillin G
HX39	R	S	R	R	S	S	R	S	S	S

Note: R is resistant; I is moderately sensitive; S is sensitive.