

**Site mutation and screening of fungal defense with high expression and bioactivity**

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**A**

Parameters	Glucose	Ca <sup>2+</sup>	Phosphorous	Urea Nitrogen	Creatinine	Total protein	Albumin	Globulin	ALB/GLO	AST	ALT	AST/ALT
Unit	mmol/L	mmol/L	mmol/L	mmol/L	μmol/L	g/L	g/L	g/L		IU/L	IU/L	
CK	1.55±0.09	1.39±0.02	3.03±0.11	9.77±0.58	94.82±2.91	51.32±1.74	31.84±1.41	19.48±0.86	1.64±0.09	27.43±1.12	52.12±1.54	0.53±0.01
PN7	1.61±0.05	1.36±0.02	3.08±0.10	10.13±0.59	97.08±6.55	48.99±1.60	30.14±0.66	18.86±1.15	1.61±0.09	32.85±1.56	60.06±5.25	0.56±0.03

**B**

Parameters	RBC	HBG	HCT	MCV	MCH	MCHC	PLT	MPV	PDW	PCT	RDW-CV	RDW-SD
Unit	10 <sup>12</sup> /L	g/L	%	fL	pg	g/L	10 <sup>9</sup> /L	fL	%	%	10 <sup>9</sup> /L	%
CK	9.23±0.27	120.00±2.35	38.85±1.20	40.13±1.21	12.88±0.26	32.53±0.69	847.00±26.62	6.48±0.23	15.73±0.29	0.06±0.01	17.85±0.15	42.35±2.42
PN7	8.84±0.31	115.25±4.85	38.60±1.42	40.27±0.38	12.73±0.42	31.95±0.33	798.25±40.12	6.58±0.31	16.13±0.40	0.03	17.58±0.39	40.93±1.20

**C**

Parameters	WBC	NEUT	LYM	MONO	EO	BASO	NEUT%	LYM%	MONO%	EO%	BASO%
Unit	10 <sup>9</sup> /L	10 <sup>9</sup> /L	10 <sup>9</sup> /L	10 <sup>9</sup> /L	10 <sup>9</sup> /L	10 <sup>9</sup> /L	%	%	%	%	%
CK	11.39±0.73	2.86±0.31	7.40±0.25	0.57±0.13	0.28±0.03	0.29±0.03	24.88±1.26	65.37±2.24	4.83±0.96	2.42±0.25	2.50±0.14
PN7	13.20±2.01	3.66±0.97	8.16±0.66	0.76±0.24	0.35±0.08	0.27±0.07	26.26±3.30	63.98±4.79	5.25±1.11	2.58±0.25	1.94±0.25

**Figure S1** Serum biochemical indices (A) and whole-blood cell profiles (B and C) of mice (ICR mice (6-8 weeks old, male, n = 5 per group; Charles River, Beijing) were intra-peritoneally injected with PN7 (10 mg/kg, body weight) for 6 days). Data are representative of three biological replicates and the mean was shown.