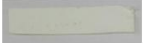







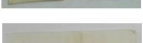

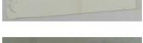
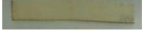
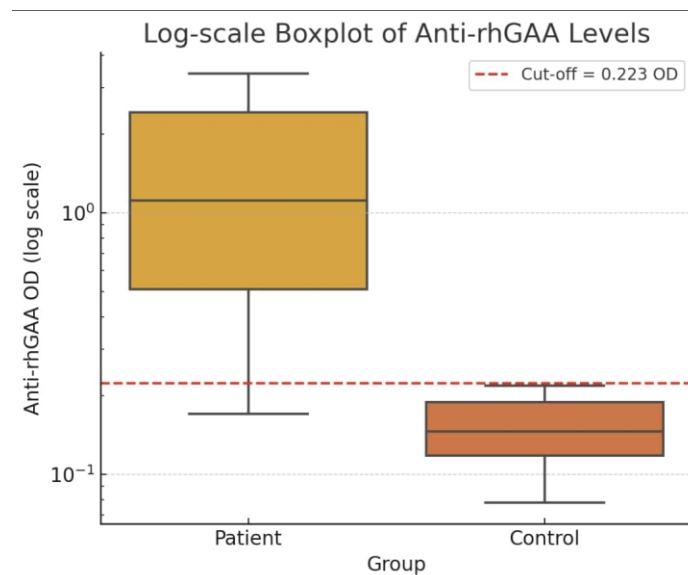
	P1	Anti Alpha-glucosidase ab: 0.192
	P2	Anti Alpha-glucosidase ab: 0.148
	P3	Anti Alpha-glucosidase ab: 1.358
	P4	Anti Alpha-glucosidase ab: 1.43
	P5	Anti Alpha-glucosidase ab: 0.21
	P6	Anti Alpha-glucosidase ab: 0.797
	P7	Anti Alpha-glucosidase ab: 1.857
	P8	Anti Alpha-glucosidase ab: 0.247
	P9	Anti Alpha-glucosidase ab: 0.587
	P10	Anti Alpha-glucosidase ab: 0.304
	P11	Anti Alpha-glucosidase ab: 0.229
	P12	Anti Alpha-glucosidase ab: 0.088
	P13	Anti Alpha-glucosidase ab: 0.3

**Supplementary figure 1. Representative Western blot image showing immunoreactive bands corresponding to anti-rhGAA antibodies in selected LOPD patients. Band intensity was evaluated by densitometry and used for cut-off determination (mean background + 3SD).**



**Supplementary figure 2. Log-transformed box-and-whisker plot of anti-rhGAA antibody levels (OD at 450 nm) in LOPD patients (n=14) and healthy controls (n=14). Individual data points are overlaid as jittered dots. The horizontal red dashed line represents the ELISA cut-off value of 0.223 OD. The log scale highlights the broader dynamic range in patient samples and improved visualization of distribution overlap. OD; Optical Density**

**Supplementary table 1. Post-hoc power analysis summary**

Parameter	Value
Test type	Independent
	Two-sample t-test
Sample size per group	14
Total sample size	28
Assumed effect size (Cohen's d)	0.5(moderate)
Significance level( $\alpha$ )	0.05
Statistical power (1- $\beta$ )	24.7%
Power analyse method	Post-hoc (using statsmodels v 0.13)