

**Table S3. IC50 of DBPII glycosylation variants.**

Immunogen	COS-7-RBC binding inhibition assay		Yeast display		Effect of DARC phenotype			
			binding inhibition assay		FyA		FyB	
	IC50 <sup>1</sup>	SD <sup>2</sup>	IC50	SD	IC50	SD	IC50	SD
Wild type (HEK293) <sup>3</sup>	2589	8.03	32.71	21.45	1203	34.85	442.7	33.6
STBP glycan <sup>3</sup>	2787	13.82	34.12	23.32	435.9	32.67	408	28.92
P1 <sup>3</sup>	2837	10.11	199.4	31.01	1237	40.14	459.7	42.91
Max <sup>3</sup>	2110	8.53	668.6	27.5	926.7	35.72	273.4	35.31

<sup>1</sup>plasma dilution at 50% inhibition

<sup>2</sup>standard deviation

<sup>3</sup>DNA immunization,protein boost