## Normalized Epitope Residue Frequencies (Z-scores) for PD1

				NOI	manz	.eu L	ricobe	11631	uue i	reque	ELICIES	o (Z-3	COLES	, 101	ГОТ					
ALA -	1.4	1.3	2.1	-1.4	1.1	0.7	1.6	0.6	1.1	1.5	0.4	1.6	2.0	1.1	-1.0	1.3	1.3	1.2	_	- 2.5
ARG -	-0.6	0.3	-0.4	-0.1	0.1	-0.2	0.2	-1.2	-0.1	-0.5	-0.9	-0.2	-0.1	-0.1	1.4	-1.0	0.0	-0.1		
ASN -	-0.6	-0.8	-0.4	-0.1	-0.9	-1.1	-1.1	0.6	1.1	0.5	0.4	-0.2	-0.1	-0.1	0.2	-1.0	1.3	-0.1		- 2.0
ASP -	0.4	0.3	0.9	1.1	1.1	-0.2	0.2	0.6	1.1	1.5	-0.9	-0.2	-0.1	-0.1	-1.0	-1.0	-1.3	-1.4		2.0
GLN -	0.4	0.3	0.9	-0.1	0.1	1.7	0.2	2.5	-0.1	2.5	-0.9	0.7	-1.1	-0.1	0.2	0.2	0.0	-0.1		
GLU -	1.4	0.3	-0.4	-0.1	0.1	0.7	0.2	-0.3	-0.1	-0.5	1.8	0.7	0.9	1.1	0.2	1.3	0.0	-0.1	_	· 1.5
GLY -	-0.6	-0.8	-0.4	-0.1	-0.9	-1.1	-1.1	-0.3	-1.3	-0.5	-0.9	-1.1	-1.1	-1.3	-1.0	-1.0	-1.3	-1.4		
ILE -	0.4	-0.8	0.9	1.1	-0.9	0.7	1.6	0.6	1.1	0.5	0.4	0.7	0.9	1.1	0.2	1.3	1.3	1.2	-	1.0
ē ren −	-0.6	0.3	-0.4	-0.1	1.1	-0.2	0.2	0.6	-0.1	0.5	0.4	-0.2	-0.1	-0.1	0.2	0.2	0.0	-0.1		ά
Residue - SYJ BAN - TEM	0.4	0.3	0.9	-0.1	0.1	0.7	0.2	-0.3	-0.1	0.5	0.4	0.7	0.9	1.1	1.4	1.3	2.5	2.6	-	- 0.5 - Score
ڪ MET -	-1.6	-0.8	-1.6	-1.4	-0.9	-1.1	-1.1	-1.2	-1.3	-1.5	-0.9	-1.1	-1.1	-1.3	0.2	-1.0	-1.3	-0.1		,
NAG -	-1.6	-0.8	-1.6	-1.4	-0.9	-1.1	-1.1	-1.2	-1.3	-0.5	-0.9	-1.1	-1.1	-1.3	-1.0	-1.0	-1.3	-1.4	_	0.0
PHE -	0.4	-0.8	0.9	1.1	-0.9	-0.2	0.2	-1.2	-0.1	-0.5	0.4	-0.2	-1.1	1.1	-1.0	0.2	-1.3	-1.4		
PRO -	1.4	2.3	0.9	1.1	2.1	1.7	1.6	0.6	-1.3	-0.5	1.8	0.7	0.9	1.1	2.7	1.3	0.0	1.2	_	-0.5
SER -	1.4	2.3	0.9	2.4	2.1	1.7	1.6	1.6	2.4	0.5	1.8	2.5	2.0	1.1	0.2	1.3	0.0	-0.1		0,5
THR -	0.4	-0.8	-0.4	-0.1	0.1	-0.2	-1.1	-0.3	-0.1	-0.5	-0.9	-1.1	-0.1	-1.3	0.2	-1.0	0.0	-0.1		
TRP -	-1.6	-0.8	-1.6	-1.4	-0.9	-1.1	-1.1	-1.2	-1.3	-1.5	-0.9	-1.1	-1.1	-1.3	0.2	-1.0	0.0	-0.1	_	-1.0
TYR -	-0.6	-0.8	-0.4	-0.1	-0.9	-1.1	-1.1	-0.3	-0.1	-0.5	-0.9	-1.1	-1.1	-1.3	-1.0	-1.0	0.0	-0.1		
VAL -	-0.6	-0.8	-0.4	-0.1	-0.9	-0.2	0.2	-0.3	-0.1	-0.5	0.4	-0.2	-0.1	-0.1	-1.0	0.2	0.0	-0.1	_	-1.5
•	Sp8c'	50gt	4005	site'.	Suto	6jjP	6×04	67 <sup>K</sup>	10ta'	1com	nous'.	1090	1451	MIRT	8850	3045 ,	au31 .	3132		
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