

	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S	T	V	W	Y	
1:Q	0.41%	0.01%	0.40%	4.94%	0.01%	0.42%	4.24%	0.05%	5.02%	5.59%	0.35%	0.36%	5.38%	65.63%	5.75%	0.25%	0.41%	0.41%	0.19%	0.17%	
2:V	4.75%	0.02%	0.17%	3.52%	0.33%	3.19%	0.01%	2.63%	0.52%	7.88%	6.33%	0.04%	0.25%	0.12%	0.44%	0.21%	0.78%	68.77%	0.04%	0.00%	
3:Q	0.08%	0.06%	0.29%	1.26%	0.04%	0.14%	11.23%	0.10%	5.32%	3.02%	0.11%	1.00%	2.31%	69.28%	4.68%	0.21%	0.28%	0.11%	0.32%	0.16%	
4:L	0.85%	0.02%	0.02%	0.50%	0.64%	0.40%	0.04%	0.80%	0.47%	69.77%	5.98%	0.02%	2.55%	0.89%	1.41%	1.11%	0.58%	13.66%	0.27%	0.00%	
5:V	5.80%	0.00%	0.26%	4.04%	0.07%	3.60%	0.01%	1.43%	0.41%	8.21%	7.22%	0.01%	0.31%	0.11%	0.38%	0.16%	0.81%	67.14%	0.03%	0.00%	
6:E	5.38%	0.00%	3.51%	73.25%	0.00%	0.00%	7.72%	0.15%	0.03%	4.09%	0.23%	0.27%	0.18%	0.20%	1.72%	0.38%	0.08%	0.48%	2.27%	0.03%	0.02%
7:S	1.84%	2.06%	0.03%	0.00%	2.07%	0.06%	0.05%	0.06%	0.00%	0.30%	0.00%	0.03%	4.22%	0.00%	0.09%	86.80%	1.63%	0.07%	0.07%	0.62%	
8:G	0.61%	0.01%	0.14%	2.65%	0.00%	92.05%	0.00%	0.00%	0.08%	0.05%	0.03%	0.00%	0.02%	0.06%	2.75%	0.05%	0.06%	0.67%	0.76%	0.00%	
9:G	2.57%	0.02%	0.28%	7.65%	0.00%	62.97%	0.03%	0.31%	0.71%	0.27%	0.03%	0.05%	0.25%	0.14%	19.75%	3.01%	1.10%	0.84%	0.01%	0.00%	
10:G	1.66%	0.80%	4.07%	0.10%	0.10%	89.83%	0.07%	0.05%	0.01%	0.03%	0.00%	0.10%	0.05%	0.00%	0.92%	1.02%	0.10%	1.11%	0.02%	0.05%	
11:V	6.56%	0.00%	0.27%	4.12%	0.12%	3.75%	0.01%	1.08%	0.12%	7.90%	4.88%	0.01%	0.38%	0.13%	0.94%	0.29%	0.74%	68.61%	0.06%	0.00%	
12:V	4.97%	0.02%	1.05%	0.14%	0.86%	2.26%	0.02%	3.61%	0.02%	2.59%	0.15%	0.04%	0.12%	0.00%	0.05%	0.12%	0.27%	83.71%	0.00%	0.01%	
13:Q	0.09%	0.01%	0.05%	0.69%	0.00%	0.05%	2.07%	0.00%	0.79%	3.64%	0.06%	0.04%	4.08%	81.96%	5.94%	0.18%	0.13%	0.05%	0.07%	0.08%	
14:P	4.07%	0.33%	0.04%	0.01%	0.31%	0.09%	0.46%	0.13%	0.02%	1.32%	0.01%	0.13%	75.82%	0.05%	1.03%	10.71%	5.16%	0.21%	0.02%	0.07%	
15:G	2.23%	0.03%	0.94%	8.08%	0.00%	82.17%	0.01%	0.02%	0.25%	0.16%	0.09%	0.02%	0.08%	0.19%	2.57%	0.11%	0.09%	2.16%	0.67%	0.01%	
16:R	0.32%	0.03%	0.02%	0.56%	0.00%	3.52%	0.02%	0.19%	8.59%	0.31%	2.99%	0.22%	0.17%	0.40%	76.65%	0.78%	3.93%	0.39%	0.92%	0.00%	
17:S	2.28%	2.57%	0.10%	0.00%	2.31%	0.07%	0.13%	0.07%	0.01%	0.44%	0.00%	0.15%	5.11%	0.00%	0.11%	84.18%	1.12%	0.10%	0.07%	1.18%	
18:L	0.07%	0.00%	0.00%	0.04%	0.17%	0.04%	0.10%	0.08%	0.04%	88.65%	0.74%	0.00%	4.11%	2.20%	1.94%	0.09%	0.07%	1.64%	0.03%	0.00%	
19:R	0.08%	0.02%	0.02%	0.16%	0.00%	5.21%	0.01%	0.53%	1.76%	0.04%	0.05%	0.17%	0.07%	0.07%	88.80%	1.64%	1.31%	0.04%	0.03%	0.00%	
20:L	0.17%	0.09%	0.05%	0.00%	0.30%	0.06%	1.36%	1.02%	0.01%	81.76%	0.05%	0.07%	6.22%	0.07%	1.72%	0.21%	0.12%	3.88%	0.00%	0.04%	
21:S	2.88%	1.85%	0.08%	0.00%	1.90%	0.08%	0.18%	0.06%	0.01%	0.67%	0.00%	0.08%	7.83%	0.01%	0.15%	81.47%	1.29%	0.15%	0.08%	1.23%	
22:C	0.17%	66.77%	0.25%	0.02%	3.91%	2.19%	0.75%	0.10%	0.02%	0.84%	0.00%	0.30%	0.55%	0.03%	4.88%	11.14%	0.20%	0.08%	2.54%	5.25%	
23:A	81.51%	0.01%	0.23%	3.05%	0.02%	0.80%	0.01%	0.51%	0.16%	0.31%	0.04%	0.02%	2.49%	0.04%	0.15%	3.31%	6.45%	0.88%	0.00%	0.00%	
24:A	75.87%	0.05%	4.88%	0.31%	0.16%	3.81%	0.03%	0.42%	0.02%	0.41%	0.02%	0.11%	1.31%	0.00%	0.04%	0.64%	2.12%	9.75%	0.00%	0.04%	
25:S	1.51%	3.03%	0.06%	0.00%	2.25%	0.13%	0.09%	0.06%	0.00%	0.54%	0.00%	0.04%	5.51%	0.01%	0.15%	84.53%	1.06%	0.14%	0.08%	0.78%	
26:G	5.18%	0.03%	1.35%	11.92%	0.02%	71.87%	0.05%	0.23%	0.60%	0.26%	0.02%	0.10%	0.33%	0.28%	4.81%	0.25%	0.68%	2.00%	0.02%	0.01%	
27:F	0.13%	2.46%	0.09%	0.01%	65.53%	0.13%	0.21%	1.50%	0.01%	21.57%	0.07%	0.10%	0.67%	0.01%	0.34%	3.47%	0.09%	2.67%	0.10%	0.85%	
28:T	6.50%	0.13%	0.17%	0.01%	0.24%	0.23%	0.10%	4.63%	0.22%	0.36%	0.40%	1.47%	4.68%	0.01%	0.54%	6.27%	73.28%	0.68%	0.01%	0.07%	
29:F	0.10%	3.43%	0.04%	0.00%	67.01%	0.07%	0.13%	0.65%	0.00%	21.56%	0.06%	0.04%	0.50%	0.02%	0.17%	3.63%	0.05%	1.58%	0.13%	0.81%	
30:S	1.10%	2.31%	1.36%	0.17%	0.45%	3.47%	1.24%	7.97%	1.91%	0.61%	0.53%	15.04%	1.14%	0.13%	12.48%	33.72%	15.04%	0.68%	0.17%	0.49%	
31:S	1.11%	3.02%	2.26%	0.25%	0.45%	8.13%	0.96%	3.27%	1.75%	0.52%	0.33%	10.70%	0.44%	0.09%	17.25%	40.90%	6.43%	0.78%	0.64%	0.72%	
32:Y	0.22%	10.77%	2.35%	0.20%	11.56%	0.27%	7.58%	0.37%	0.30%	1.70%	0.01%	3.71%	0.68%	0.48%	0.80%	13.02%	0.44%	0.22%	0.24%	45.08%	
33:A	56.30%	0.48%	1.90%	0.80%	0.75%	3.48%	0.29%	1.91%	0.05%	1.21%	0.06%	0.58%	6.70%	0.03%	0.66%	6.25%	13.64%	4.73%	0.02%	0.17%	
34:M	0.99%	0.06%	0.04%	0.44%	2.39%	0.42%	0.03%	19.45%	1.48%	21.75%	30.44%	0.17%	1.27%	0.26%	2.49%	1.08%	6.15%	10.81%	0.24%	0.01%	
35:H	0.43%	0.40%	2.37%	0.18%	0.58%	0.19%	55.71%	0.40%	1.37%	5.71%	0.05%	6.73%	7.80%	6.57%	6.54%	1.35%	0.80%	0.42%	0.05%	2.35%	
36:W	0.02%	3.40%	0.01%	0.04%	0.09%	3.49%	0.01%	0.00%	0.01%	0.78%	0.01%	0.01%	0.04%	0.02%	5.06%	0.97%	0.01%	0.02%	85.86%	0.16%	
37:V	5.14%	0.02%	1.06%	0.07%	0.49%	2.25%	0.01%	2.23%	0.01%	0.95%	0.06%	0.04%	0.06%	0.00%	0.03%	0.08%	0.19%	87.31%	0.00%	0.00%	
38:R	0.05%	3.21%	0.13%	0.00%	0.03%	1.84%	1.97%	0.01%	0.00%	0.56%	0.00%	0.05%	0.94%	0.07%	90.38%	0.52%	0.01%	0.03%	0.08%	0.12%	
39:Q	0.06%	0.00%	0.02%	1.46%	0.00%	0.07%	1.20%	0.00%	0.94%	1.74%	0.04%	0.02%	4.83%	85.48%	3.92%	0.04%	0.13%	0.03%	0.02%	0.01%	
40:A	49.22%	0.12%	0.51%	0.11%	0.13%	1.45%	0.05%	0.79%	0.01%	0.18%	0.01%	0.22%	11.69%	0.00%	0.13%	6.70%	26.93%	1.73%	0.00%	0.02%	
41:P	1.80%	0.01%	0.00%	0.06%	0.01%	0.02%	0.28%	0.05%	0.02%	4.10%	0.01%	0.00%	89.50%	0.74%	0.81%	1.88%	0.61%	0.08%	0.00%	0.00%	
42:G	1.79%	0.31%	4.21%	0.24%	0.03%	89.00%	0.08%	0.07%	0.02%	0.07%	0.00%	0.11%	0.04%	0.01%	0.83%	0.72%	0.08%	2.33%	0.01%	0.06%	
43:K	1.36%	0.00%	0.07%	5.75%	0.00%	0.75%	0.04%	0.11%	46.91%	0.51%	5.82%	0.60%	1.06%	2.98%	14.91%	0.70%	17.71%	0.46%	0.25%	0.01%	
44:G	0.50%	0.11%	0.26%	0.84%	0.00%	93.90%	0.00%	0.02%	0.04%	0.03%	0.02%	0.02%	0.01%	0.01%	2.98%	0.45%	0.03%	0.41%	0.37%	0.00%	
45:L	0.08%	0.00%	0.00%	0.05%	0.06%	0.03%	0.06%	0.12%	0.03%	90.17%	0.51%	0.00%	4.33%	1.48%	1.48%	0.12%	0.06%	1.39%	0.02%	0.00%	
46:E	5.18%	0.01%	13.70%	62.95%	0.01%	7.48%	0.37%	0.07%	3.76%	0.23%	0.23%	0.84%	0.21%	1.63%	0.39%	0.14%	0.47%	2.17%	0.02%	0.12%	
47:W	0.04%	3.78%	0.01%	0.07%	0.11%	4.12%	0.01%	0.01%	0.05%	1.45%	0.04%	0.01%	0.07%	0.04%	8.83%	1.63%	0.04%	0.05%	79.54%	0.11%	
48:V	5.56%	0.00%	0.06%	4.09%	0.04%	3.61%	0.00%	0.57%	0.47%	7.28%	6.03%	0.01%	0.46%	0.20%	0.31%	0.16%	0.68%	70.42%	0.03%	0.00%	
49:A	67.31%	0.01%	0.24%	2.74%	0.01%	1.38%	0.01%	0.34%	0.20%	0.35%	0.03%	0.02%	6.77%	0.07%	0.24%	4.41%	14.56%	1.30%	0.00%	0.00%	
50:V	3.23%	0.07%	1.73%	0.27%	2.28%	1.93%	0.16%	9.19%	0.03%	11.94%	0.48%	0.20%	1.21%	0.03%	0.19%	0.47%	0.96%	65.60%	0.00%	0.04%	
51:I	1.46%	0.07%	0.15%	0.90%	3.33%	0.57%	0.07%	35.18%	3.38%	22.43%	6.93%	0.60%	1.20%	0.43%	3.17%	2.32%	7.79%	9.99%	0.02%	0.03%	
52:S	1.98%	0.57%	0.05%	0.43%	0.94%	0.11%	0.03%	0.13%	0.05%	2.55%	0.02%	0.02%	4.40%	0.04%	0.11%	86.18%	1.80%	0.18%	0.15%	0.26%	
53:Y	0.27%	12.74%	3.33%	0.22%	14.37%	0.53%	9.64%	0.51%	0.14%	2.33%	0.01%	3.06%	1.07%	0.90%	1.45%	14.31%	0.42%	0.42%	0.29%	33.98%	
54:D	2.52%	0.45%	59.09%	7.93%	0.47%	4.78%	7.00%	0.46%	0.89%	0.37%	0.02%	7.39%	0.41%	0.84%	0.57%	1.63%	0.83%	1.18%	0.01%	3.15%	
55:G	1.93%	0.04%	1.01%	5.53%	0.01%	78.17%	0.03%	0.24%	0.26%	0.29%	0.02%	0.05%	0.28%	0.16%	10.13%	0.32%	0.48%	1.02%	0.03%	0.01%	
56:S	1.05%	3.27%	1.94%	0.20%	0.62%	4.70%	1.72%	7.98%	1.15%	0.89%	0.33%	12.53%	1.34%	0.17%	8.36%	40.64%	11.25%	0.97%	0.12%	0.77%	
57:N	1.05%	0.67%	10.48%	1.60%	0.94%	1.27%	5.53%	5.41%	6.38%	0.88%	0.31%	41.87%	0.59%	0.95%	1.81%	9.95%	7.01%	0.72%	0.03%	2.54%	
58:K	1.07%	0.07%	2.92%	9.97%	0.16%	1.08%	1.30%	4.15%	41.96%	0.84%	0.46%	12.54%	0.64%	4.62%	7.31%	1.94%	8.14%	0.45%	0.02%	0.36%	
59:Y	0.18%	10.71%	5.68%	0.26%	7.29%	0.65%	7.54%	0.25%	0.43%	1.63%	0.03%	4.78%	0.39%	0.25%	0.77%	6.65%	0.28%	0.23%	0.30%	51.71%	
60:Y	0.14%	11.71%	3.17%	0.12%	6.65%	0.58%	8.05%	0.16%	0.22%	1.43%	0.01%	3.88%	0.43%	0.31%	1.79%	7.37%	0.31%	0.12%	0.13%	54.43%	
61:A	49.77%	0.01%	0.62%	6.71%	0.02%	1.72%	0.04%	0.90%	0.43%	0.52%	0.06%	0.06%	8.75%	0.24%	1.10%	5.96%	21.76%	1.34%	0.00%	0.01%	
62:D	1.45%	0.04%	88.57%	4.82%	0.03%	2.19%	0.52%	0.04%	0.16%	0.03%	0.01%	0.83%	0.02%	0.10%	0.04%	0.07%	0.06%	0.63%	0.00%	0.39%	
63:S	0.70%	2.08%	0.04%	0.00%	2.03%	0.10%	0.09%	0.06%	0.00%	0.42%	0.00%	0.05%	3.58%	0.00%	0.08%	88.01%	1.41%	0.06%	0.07%	1.20%	
64:V	4.03%																				