

**Table S1. anti-spike binding antibody units (BAU/mL)**

	AZD1222 / AZD1222	AZD1222 / BNT162b2	BNT162b2 / BNT162b2	all (n=190)
<i><u>sex differences</u></i>				
male: median (min-max)	562.3 (98.8 – 2140)	2029 (1092 – 4273)	824.6 (137.6 – 2206)	830 (98.8 – 4273)
female: median (min-max)	403.8 (35.6 – 3023)	2234.5 (199.2 – 24762)	661.9 (178.9 – 2580)	968.5 (35.6 – 24762)
p (Mann-Whitney U test)	0.1266	0.8492	0.5875	0.1959
<i><u>correlation with age</u></i>				
r (spearman rank)	r = -0.1220 95%	r = -0.07360	<b>r = -0.3989</b>	<b>r = -0.2338</b>
95 % CI	-0.3693 to 0.1415	-0.3224 to 0.1847	<b>-0.5894 to -0.1665</b>	<b>-0.3677 to -0.09033</b>
p-value	0.3490	0.5665	<b>0.0009</b>	<b>0.0012</b>
<i><u>correlation with % neutralization capacity</u></i>				
r (spearman rank)	<b>r = 0.4718</b>	<b>r = 0.6701</b>	<b>r = 0.8032</b>	<b>r = 0.8033</b>
95 % CI	<b>0.2425 to 0.6513</b>	<b>0.5007 to 0.7900</b>	<b>0.6927 to 0.8768</b>	<b>0.7444 to 0.8498</b>
p-value	<b>0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
<i><u>correlation with IFN<math>\gamma</math>-producing spots</u></i>				
r (spearman rank)	r = -0.09428	r = 0.1767	r = 0.1738	r = 0.1125

95 % CI	-0.3449 to 0.1688	-0.08177 to 0.4130	-0.07860 to 0.4052	-0.03459 to 0.2549
p-value	0.4698	0.1658	0.1629	0.1222

**Table S2. anti-RBD (Wuhan-Hu-1) neutralizing capacity (%)**

	AZD1222 / AZD1222	AZD1222 / BNT162b2	BNT162b2 / BNT162b2	all (n=190)
<i><u>sex differences</u></i>				
male: median (min-max)	71 (33-95)	93 (91 – 96)	87 (38 – 93)	85 (33 – 96)
female: median (min-max)	51 (16 – 88)	94 (60 – 96)	87 (49 – 94)	87 (16 – 96)
p (Mann-Whitney U test)	0.0558	0.4490	0.9122	0.4130
<i><u>correlation with age</u></i>				
r (spearman rank)	r = -0.1259	-0.05884	<b>r = -0.3307</b>	<b>r = -0.1870</b>
95 % CI	-0.3727 to 0.1376	-0.3090 to 0.1990	<b>-0.5355 to -0.08903</b>	<b>-0.3246 to -0.04159</b>
p-value	0.3337	0.6469	<b>0.0067</b>	<b>0.0098</b>
<i><u>correlation with IFN<math>\gamma</math>-producing spots</u></i>				
r (spearman rank)	r = 0.1137	r = 0.008657	r = 0.1316	r = 0.1216

95 % CI	-0.1497 to 0.3620	-0.2467 to 0.2629	-0.1213 to 0.3685	-0.02538 to 0.2634
p-value	0.3831	0.9463	0.2923	0.0947

**Table S3. anti-RBD (Delta B.1.617.2 variant) neutralizing capacity (%)**

	AZD1222 / AZD1222	AZD1222 / BNT162b2	BNT162b2 / BNT162b2	all (n=190)
<i>sex differences</i>				
male: median (min-max)	<b>69 (37-93)</b>	93 (85 – 96)	88 (44 – 96)	85 (37 – 96)
female: median (min-max)	<b>60.8 (18-87)</b>	94 (64 – 96)	85 (56 – 96)	85 (18 – 96)
p (Mann-Whitney U test)	<b>0.038</b>	0.9207	0.7359	0.5556
<i>correlation with age</i>				
r (spearman rank)	r = -0.08332	-0.02527	<b>r = -0.2742</b>	<b>r = -0.1584</b>
95 % CI	-0.3351 to 0.1795	-0.2783 to 0.2310	<b>-0.4897 to -0.2712</b>	<b>-0.2980 to -0.01217</b>
p-value	0.5232	0.8441	<b>0.0259</b>	<b>0.0290</b>

*correlation with IFN $\gamma$ -producing spots*

r (spearman rank)	r = 0.004285	r = 0.09498	r = 0.2242	r = 0.1238
95 % CI	-0.2550 to 0.2630	-0.1638 to 0.3415	-0.0262 to 0.4482	-0.02318 to 0.2655
p-value	0.9739	0.4590	0.0703	0.0888

**Table S4. IFN $\alpha$ -producing spots**

	AZD1222 / AZD1222	AZD1222 / BNT162b2	BNT162b2 / BNT162b2	all (n=190)
<i>sex differences</i>				
male: median (min-max)	74 (0 – 102)	75 (42 – 120)	54 (6 – 87)	67 (0 – 120)
female: median (min-max)	63 (0 – 106)	72.5 (5 – 123)	58 (6 – 115)	67 (0 – 123)
p (Mann-Whitney U test)	0.6391	0,5321	0.2378	0.8676
<i>correlation with age</i>				
r (spearman rank)	r = 0.03235	r = 0.02503	r = -0.2037	r = -0.06716

95 % CI	-0.2286 to 0.2889	-0.2313 to 0.2781	-0.4308 to 0.04762	-0.2116 to 0.08017
p-value	0.8045	0.8456	0.1008	0.3572

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