

**Supplementary Table S1**  
**Antigen details used for specificity study**

Antigen details	Batch. no.	Source	Storage(°C)	
Wuhan variant virus (Working stock)	14141D001	In-House	-196 or below	
CRM197 protein	IHWS/0.4mg/ml CRM/20/01	In-House	-20	
Blank human serum details				
Details	Batch. no.	Product No.	Source	Storage
Blank human serum	0000083106	S5393	Sigma	2-8° C.

**Supplementary Table S2: Values of Reference Standard 1 in MSD Arbitrary units (AU/ml).**

Antigens	CAL-01	CAL-02	CAL-03	CAL-04	CAL-05	CAL-06	CAL-07	CAL-08
<b>W-S</b>	72	18	4.5	1.13	0.281	0.0703	0.0176	0
<b>SA-RBD (B.1.351)</b>	4.4	1.1	0.275	0.0688	0.0172	0.0043	0.00107	0
<b>W-N</b>	70	17.5	4.38	1.09	0.273	0.0684	0.0171	0
<b>Br-RBD (P.1)</b>	7.0	1.75	0.438	0.109	0.0273	0.00684	0.00171	0
<b>UK-RBD (B.1.1.7)</b>	18	4.5	1.13	0.281	0.0703	0.0176	0.00439	0
<b>Br-S (P.1)</b>	29	7.25	1.81	0.453	0.113	0.0283	0.00708	0
<b>UK-S (B.1.1.7)</b>	44	11	2.75	0.688	0.172	0.043	0.0107	0
<b>SA-S (B.1.351)</b>	25	6.25	1.56	0.391	0.0977	0.0244	0.0061	0
<b>W-RBD</b>	29	7.25	1.81	0.453	0.113	0.0283	0.00708	0

W-N, Wuhan Nucleocapsid; W-RBD, Wuhan receptor binding domain (RBD); W-S, Wuhan Spike (S); Br-RBD [P.1], Brazil RBD; Br-S [P.1], Brazil S; UK-RBD [B.1.1.7], United Kingdom RBD; UK-S [B.1.1.7], United Kingdom S; SA-RBD [B.1.351], South Africa RBD; SA-S [B.1.351] South Africa S.

**Supplementary Table S3: Assigned values (AU/ml) for sera panel**

<b>Sample ID</b>	<b>W-N</b>	<b>W-S</b>	<b>W-RBD</b>	<b>UK-S [B.1.1.7]</b>	<b>UK-RBD [B.1.1.7]</b>	<b>SA-S [B.1.351]</b>	<b>SA-RBD [B.1.351]</b>	<b>Br-S [P.1]</b>	<b>Br-RBD [P.1]</b>
<b>Sample 1</b>	7962	47192	15314	42996	15076	25790	3978	26232	6513
<b>Sample 2</b>	206	2740	878	1794	953	1474	637	1562	737
<b>Sample 3</b>	11168	35902	10717	34240	8799	10131	4247	19532	7065
<b>Sample 4</b>	974	2960	1207	2267	1257	2125	801	1970	1144
<b>Sample 5</b>	93756	493127	236403	482255	263854	351300	174488	357748	250290
<b>Sample 6</b>	40675	52522	21619	48303	21832	50230	14690	34269	17854
<b>Sample 7</b>	4896	3297	790	2334	694	1882	233	2961	352
<b>Sample 8</b>	45344	27350	7971	17918	5658	9616	2155	11526	3381
<b>Sample 9</b>	130339	94318	21859	79280	20147	61017	5195	58047	9520

W-N, Wuhan Nucleocapsid; W-RBD, Wuhan receptor binding domain (RBD); W-S, Wuhan Spike (S); Br-RBD [P.1], Brazil RBD; Br-S [P.1], Brazil S; UK-RBD [B.1.1.7], United Kingdom RBD; UK-S [B.1.1.7], United Kingdom S; SA-RBD [B.1.351], South Africa RBD; SA-S [B.1.351] South Africa S.