

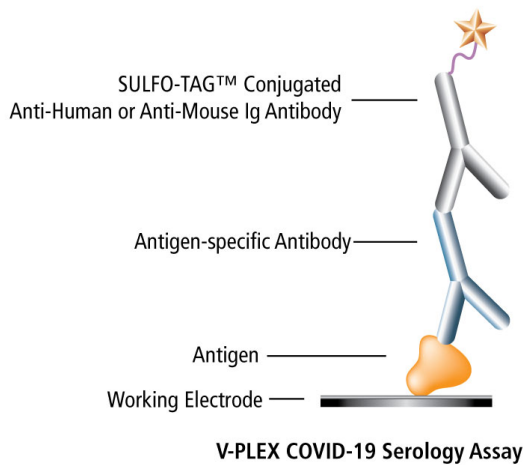


V-PLEX[®] Serology Panels for SARS-CoV-2 Variants

V-PLEX Serology Panels now available for more than 35 SARS-CoV-2 variants, including the Alpha, Beta, Gamma, Delta, Lambda, and Mu variants. These tests supplement MSD's V-PLEX SARS-CoV-2 Panel 2, which was chosen by Operation Warp Speed (OWS) as the basis of its standard binding assays for immunogenicity assessments in all funded Phase III clinical trials of vaccines.

Kits are available for use with human and mouse samples. All human V-PLEX Serology Panels are provided as complete kits, including the same reference standards and controls that are being used in OWS laboratories to analyze clinical trial samples. The Reference Standard 1 in human V-PLEX Serology kits is calibrated against the WHO International Standard (NIBSC code: 20/136).

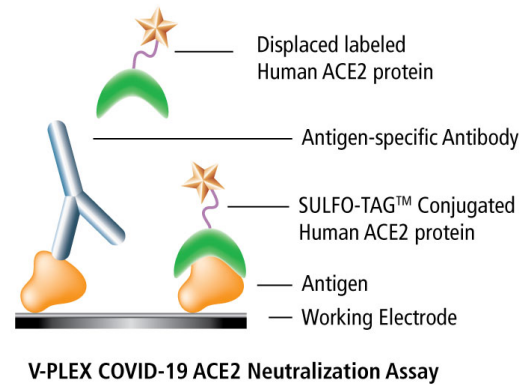
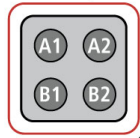
Human kits are available in 96- and 384-well formats for quantitative serological testing and functional testing (ACE2 blocking). Mouse kits are available in 96-well format for qualitative serological testing.



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96-Well 10-Spot Plate**



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384-Well 4-Spot Plate**



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SARS-CoV-2 Spike Antigens

Lineages	Amino Acid Modifications	Common Designation
A.23.1	F157L, V367F, Q613H, P681R	Uganda
A.VOI.V2	D80Y, ΔY144, ΔI210, D215G, Δ246-248, L249M, W258L, R346K, T478R, E484K, H655Y, P681H, Q957H	Tanzania
AY.1	T19R, Δ157/158, K417N, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
AY.1	(Alt Seq 1): T19R, T95I, G142D, E156G, Δ157/158, W258L, K417N, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
AY.2	T19R, V70F, G142D, Δ157/158, A222V, K417N, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
AY.2	(Alt Seq 1): T19R, V70F, G142D, E156G, Δ157/158, A222V, K417N, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
AY.12	T19R, Δ156/157, R158G, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
B.1	D614G	-
B.1.1.519	T478K, D614G, P681H, T732A	Mexico/Texas BV-2
B.1.1.7	ΔH69-V70, ΔY144, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H	Alpha
B.1.1.7+E484K	ΔH69-V70, ΔY144, E484K, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H	U.K.
B.1.258.17	ΔH69-V70, L189F, N439K, D614G, V772I	Europe
B.1.351	L18F, D80A, D215G, Δ242-244, R246I, K417N, E484K, N501Y, D614G, A701V	Beta
B.1.351.1	D80A, D215G, K417N, E484K, N501Y, D614G, A701V	Botswana
B.1.429	S13I, W152C, L452R, D614G	Epsilon
B.1.466.2	W152R, N439K, D614G, P681R	Indonesia
B.1.525	Q52R, A67V, ΔH69-V70, ΔY144, E484K, Q677H, D614G, F888L	Eta
B.1.526	L5F, T95I, D253G, E484K, D614G, A701V	Iota
B.1.526.1	D80G, ΔY144, F157S, L452R, D614G, T859N, D950H	New York
B.1.617	L452R, E484Q, D614G	India
B.1.617.1	T95I, G142D, E154K, L452R, E484Q, D614G, P681R, Q1071H	Kappa
B.1.617.2	T19R, Δ157/158, L452R, T478K, D614G, P681R, D950N	Delta sub-lineage
B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14	(Alt Seq 1): T19R, G142D, Δ156/157, R158G, L452R, T478K, D614G, P681R, D950N	Delta sub-lineages
B.1.617.2 +1	T19R, G142D, Δ156/157, R158G, L452R, T478K, E484K, D614G, P681R, D950N	Delta +1
B.1.617.2 +2	T19R, G142D, Δ156/157, R158G, L452R, T478K, E484K, N501Y, D614G, P681R, D950N	Delta +2
B.1.617.2 +3	T19R, G142D, Δ156/157, R158G, K417N, L452R, T478K, E484K, N501Y, D614G, P681R, D950N	Delta +3
B.1.617.2 +4	T19R, G142D, Δ156/157, R158G, K417N, N439K, L452R, T478K, E484K, N501Y, D614G, P681R, D950N	Delta +4
B.1.617.2; AY.4	(Alt Seq 2): T19R, T95I, G142D, Δ156/157, R158G, L452R, T478K, D614G, P681R, D950N	Delta sub-lineages
B.1.617.2+ΔY144	T19R, ΔY144, Δ157/158, L452R, T478K, D614G, P681R, D950N	Vietnam
B.1.617.3	T19R, G142D, L452R, E484Q, D614G, P681R, D950N	India
B.1.618	ΔY145/146, E484K, D614G	India
B.1.620	P26S, ΔH69-V70, V126A, ΔY144, Δ242-244, H245Y, S477N, E484K, D614G, P681H, T1027I, D1118H	Europe
B.1.621	T95I, Y144T, Y145S, ins146N, R346K, E484K, N501Y, D614G, P681H, D950N	Mu
BV-1	ΔH69-V70, ΔY144, Q493R, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H	Texas BV-1
C.37	G75V, T76I, ΔR246, ΔS247, ΔY248, ΔL249, ΔT250, ΔP251, ΔG252, D253N, L452Q, F490S, D614G, T859N	Lambda
P.1	L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I, V1176F	Gamma
P.2	E484K, D614G, V1176F	Zeta
P.3	Δ141-143, E484K, N501Y, D614G, P681H, E1092K, H1101Y, V1176F	Philippines
R.1	W152L, E484K, D614G, G769V	Kentucky

- = Not applicable

Note: Alternative S-GENE mutations for Spike of AY.1, AY.2, and B.1.617.2 are listed as "Alt Seq #."



SARS-CoV-2 S1 RBD Antigens

Lineages	Amino Acid Modifications	Common Designation
A.23.1	V367F	Uganda
A.VOI.V2	R346K, T478R, E484K	Tanzania
AY.1	K417N, L452R, T478K	Delta sub-lineage
AY.2	K417N, L452R, T478K	Delta sub-lineage
AY.3	L452R, T478K	Delta sub-lineage
AY.4	L452R, T478K	Delta sub-lineage
AY.5	L452R, T478K	Delta sub-lineage
AY.6	L452R, T478K	Delta sub-lineage
AY.7	L452R, T478K	Delta sub-lineage
AY.12	L452R, T478K	Delta sub-lineage
AY.14	L452R, T478K	Delta sub-lineage
B.1.1.519	T478K	Mexico/Texas BV-2
B.1.1.7	N501Y	Alpha
B.1.1.7+E484K	E484K, N501Y	U.K.
B.1.214.2	Q414K, N450K	Belgium
B.1.258.17	N439K	Europe
B.1.351	K417N, E484K, N501Y	Beta
B.1.351.1	K417N, E484K, N501Y	Botswana
B.1.427	L452R	Epsilon
B.1.429	L452R	Epsilon
B.1.466.2	N439K	Indonesia
B.1.525	E484K	Eta
B.1.526	E484K	Iota
B.1.526.1	L452R	New York
B.1.526.2	S477N	New York
B.1.617	L452R, E484Q	India
B.1.617.1	L452R, E484Q	Kappa
B.1.617.2	L452R, T478K	Delta sub-lineage
B.1.617.2+ΔY144	L452R, T478K	Vietnam
B.1.617.3	L452R, E484Q	India
B.1.618	E484K	India
B.1.620	S477N, E484K	Europe
BV-1	Q493R, N501Y	Texas BV-1
C.37	L452Q, F490S	Lambda
P.1	K417T, E484K, N501Y	Gamma
P.2	E484K	Zeta
P.3	E484K, N501Y	Philippines
R.1	E484K	Kentucky



SARS-CoV-2 Variant Focus Panels

SARS-CoV-2 384 Panel 2	Spot Location	Lineages	Antigens	Common Designation
Human K25420U (IgG) K25421U (IgM) K25422U (IgA) K25423U (ACE2)	Spot A1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot A2	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot B1	B.1.351	SARS-CoV-2 S1 RBD (B.1.351)	Beta
	Spot B2	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta

SARS-CoV-2 Panel 5	Spot Location	Lineages	Antigens	Common Designation
Human K15429U (IgG) K15430U (IgM) K15431U (IgA) K15432U (ACE2) Mouse K15478U (IgG) K15479U (IgM) K15480U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	-	<i>BSA</i>	-
	Spot 3	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot 4	-	<i>BSA</i>	-
	Spot 5	-	<i>BSA</i>	-
	Spot 6	-	<i>BSA</i>	-
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	-	<i>BSA</i>	-

SARS-CoV-2 Panel 6	Spot Location	Lineages	Antigens	Common Designation
Human K15433U (IgG) K15434U (IgM) K15435U (IgA) K15436U (ACE2) Mouse K15481U (IgG) K15482U (IgM) K15483U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1	SARS-CoV-2 Spike (D614G)	-
	Spot 3	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot 4	-	<i>BSA</i>	-
	Spot 5	-	<i>BSA</i>	-
	Spot 6	-	<i>BSA</i>	-
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan



SARS-CoV-2 Panel 7	Spot Location	Lineages	Antigens	Common Designation
Human K15437U (IgG) K15438U (IgM) K15439U (IgA) K15440U (ACE2) Mouse K15484U (IgG) K15485U (IgM) K15486U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1.351	SARS-CoV-2 S1 RBD (B.1.351)	Beta
	Spot 3	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot 4	P.1	SARS-CoV-2 S1 RBD (P.1)	Gamma
	Spot 5	-	<i>BSA</i>	-
	Spot 6	B.1.1.7	SARS-CoV-2 S1 RBD (B.1.1.7)	Alpha
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan

SARS-CoV-2 Panel 8	Spot Location	Lineages	Antigens	Common Designation
Human K15444U (IgG) K15445U (IgM) K15446U (IgA) K15447U (ACE2) Mouse K15487U (IgG) K15488U (IgM) K15489U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1.429	SARS-CoV-2 S1 RBD (B.1.429)	Epsilon
	Spot 3	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot 4	B.1.526	SARS-CoV-2 S1 RBD (B.1.526)	Iota
	Spot 5	-	<i>BSA</i>	-
	Spot 6	B.1.526.2	SARS-CoV-2 S1 RBD (B.1.526.2)	New York
	Spot 7	-	<i>BSA</i>	-
	Spot 8	B.1.526	SARS-CoV-2 Spike (B.1.526)	Iota
	Spot 9	B.1.429	SARS-CoV-2 Spike (B.1.429)	Epsilon
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan



NEW! SARS-CoV-2 Variant Screening Panels

SARS-CoV-2 Panel 9	Spot Location	Lineages	Antigens	Common Designation
Human K15448U (IgG) K15449U (IgM) K15450U (IgA) K15451U (ACE2) Mouse K15490U (IgG) K15491U (IgM) K15492U (IgA)	Spot 1	B.1.427; B.1.429; B.1.526.1	SARS-CoV-2 S1 RBD (L452R)	Epsilon , California, New York
	Spot 2	B.1.351; B.1.351.1	SARS-CoV-2 S1 RBD (K417N, E484K, N501Y)	Beta , Botswana
	Spot 3	B.1.525; B.1.526; B.1.618; P.2; R.1	SARS-CoV-2 S1 RBD (E484K)	Eta, Iota , India, Zeta , Kentucky
	Spot 4	P.1	SARS-CoV-2 S1 RBD (K417T, E484K, N501Y)	Gamma
	Spot 5	B.1.526.2	SARS-CoV-2 S1 RBD (S477N)	New York
	Spot 6	B.1.1.7	SARS-CoV-2 S1 RBD (N501Y)	Alpha
	Spot 7	B.1.1.7+E484K; P.3	SARS-CoV-2 S1 RBD (E484K, N501Y)	U.K., Philippines
	Spot 8	B.1.617; B.1.617.1; B.1.617.3	SARS-CoV-2 S1 RBD (L452R, E484Q)	Kappa , India
	Spot 9	B.1.214.2	SARS-CoV-2 S1 RBD (Q414K, N450K)	Belgium
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan

SARS-CoV-2 Panel 11	Spot Location	Lineages	Antigens	Common Designation
Human K15455U (IgG) K15456U (IgM) K15457U (IgA) K15458U (ACE2) Mouse K15495U (IgG) K15496U (IgM) K15497U (IgA)	Spot 1	B.1.427; B.1.429; B.1.526.1	SARS-CoV-2 S1 RBD (L452R)	Epsilon , California, New York
	Spot 2	B.1.351; B.1.351.1	SARS-CoV-2 S1 RBD (K417N, E484K, N501Y)	Beta , Botswana
	Spot 3	B.1.525; B.1.526; B.1.618; P.2; R.1	SARS-CoV-2 S1 RBD (E484K)	Eta, Iota , India, Zeta , Kentucky
	Spot 4	P.1	SARS-CoV-2 S1 RBD (K417T, E484K, N501Y)	Gamma
	Spot 5	B.1.526.2	SARS-CoV-2 S1 RBD (S477N)	New York
	Spot 6	B.1.1.7	SARS-CoV-2 S1 RBD (N501Y)	Alpha
	Spot 7	B.1.1.7+E484K; P.3	SARS-CoV-2 S1 RBD (E484K, N501Y)	U.K., Philippines
	Spot 8	B.1.617; B.1.617.1; B.1.617.3	SARS-CoV-2 S1 RBD (L452R, E484Q)	Kappa , India
	Spot 9	AY.3; AY.4; AY.5; AY.6; AY.7; AY.12; AY.14; B.1.617.2; B.1.617.2+Δ144	SARS-CoV-2 S1 RBD (L452R, T478K)	Delta sub-lineages, Vietnam
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan



SARS-CoV-2 Panel 12	Spot Location	Lineages	Antigens	Common Designation
Human K15459U (IgG) K15460U (IgM) K15461U (IgA) K15462U (ACE2) Mouse K15503U (IgG) K15504U (IgM) K15505U (IgA)	Spot 1	A.23.1	SARS-CoV-2 S1 RBD (V367F)	Uganda
	Spot 2	C.37	SARS-CoV-2 S1 RBD (L452Q, F490S)	Lambda
	Spot 3	B.1.525; B.1.526; B.1.618; P.2; R.1	SARS-CoV-2 S1 RBD (E484K)	Eta, Iota , India, Zeta , Kentucky
	Spot 4	BV-1	SARS-CoV-2 S1 RBD (Q493R, N501Y)	Texas BV-1
	Spot 5	B.1.1.519	SARS-CoV-2 S1 RBD (T478K)	Mexico/Texas BV-2
	Spot 6	A.VOI.V2	SARS-CoV-2 S1 RBD (R346K, T478R, E484K)	Tanzania
	Spot 7	B.1.1.7+E484K; P.3	SARS-CoV-2 S1 RBD (E484K, N501Y)	U.K., Philippines
	Spot 8	B.1.617; B.1.617.1; B.1.617.3	SARS-CoV-2 S1 RBD (L452R, E484Q)	Kappa , India
	Spot 9	AY.3; AY.4; AY.5; AY.6; AY.7; AY.12; AY.14; B.1.617.2; B.1.617.2+Δ144	SARS-CoV-2 S1 RBD (L452R, T478K)	Delta sub-lineages, Vietnam
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan

SARS-CoV-2 Panel 13	Spot Location	Lineages	Antigens	Common Designation
Human K15463U (IgG) K15464U (IgM) K15465U (IgA) K15466U (ACE2) Mouse K15506U (IgG) K15507U (IgM) K15508U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	P.2	SARS-CoV-2 Spike (P.2)	Zeta
	Spot 3	B.1.617.1	SARS-CoV-2 Spike (B.1.617.1)	Kappa
	Spot 4	B.1.617.2	SARS-CoV-2 Spike (B.1.617.2)	Delta sub-lineage
	Spot 5	B.1.617.3	SARS-CoV-2 Spike (B.1.617.3)	India
	Spot 6	B.1.617	SARS-CoV-2 Spike (B.1.617)	India
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	B.1.526.1	SARS-CoV-2 Spike (B.1.526.1)	New York

SARS-CoV-2 Panel 14	Spot Location	Lineages	Antigens	Common Designation
Human K15468U (IgG) K15469U (IgM) K15470U (IgA) K15471U (ACE2) Mouse K15509U (IgG) K15510U (IgM) K15511U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	A.23.1	SARS-CoV-2 Spike (A.23.1)	Uganda
	Spot 3	A.VOI.V2	SARS-CoV-2 Spike (A.VOI.V2)	Tanzania
	Spot 4	B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14	SARS-CoV-2 Spike (B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14) Alt Seq 1	Delta sub-lineages
	Spot 5	C.37	SARS-CoV-2 Spike (C.37)	Lambda
	Spot 6	R.1	SARS-CoV-2 Spike (R.1)	Kentucky
	Spot 7	P.3	SARS-CoV-2 Spike (P.3)	Philippines
	Spot 8	B.1.525	SARS-CoV-2 Spike (B.1.525)	Eta
	Spot 9	B.1.1.519	SARS-CoV-2 Spike (B.1.1.519)	Mexico/Texas BV-2
	Spot 10	BV-1	SARS-CoV-2 Spike (BV-1)	Texas BV-1

Note: Alternative S-GENE mutations for Spike of B.1.617.2 are listed as "Alt Seq #."



SARS-CoV-2 Panel 15	Spot Location	Lineages	Antigens	Common Designation
Human K15499U (IgG) K15500U (IgM) K15501U (IgA) K15502U (ACE2) Mouse K15512U (IgG) K15513U (IgM) K15514U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	AY.1	SARS-CoV-2 Spike (AY.1)	Delta sub-lineage
	Spot 3	AY.2	SARS-CoV-2 Spike (AY.2)	Delta sub-lineage
	Spot 4	B.1.617.2+ΔY144	SARS-CoV-2 Spike (B.1.617.2+ΔY144)	Vietnam
	Spot 5	B.1.620	SARS-CoV-2 Spike (B.1.620)	Europe
	Spot 6	B.1.258.17	SARS-CoV-2 Spike (B.1.258.17)	Europe
	Spot 7	B.1.466.2	SARS-CoV-2 Spike (B.1.466.2)	Indonesia
	Spot 8	B.1.1.7+E484K	SARS-CoV-2 Spike (B.1.1.7+E484K)	U.K.
	Spot 9	B.1.351.1	SARS-CoV-2 Spike (B.1.351.1)	Botswana
	Spot 10	B.1.618	SARS-CoV-2 Spike (B.1.618)	India

SARS-CoV-2 Panel 16	Spot Location	Lineages	Antigens	Common Designation
Human K15516U (IgG) K15517U (IgM) K15518U (IgA) K15519U (ACE2) Mouse K15520U (IgG) K15521U (IgM) K15522U (IgA)	Spot 1	AY.1; AY.2	SARS-CoV-2 S1 RBD (K417N, L452R, T478K)	Delta sub-lineages
	Spot 2	B.1.351; B.1.351.1	SARS-CoV-2 S1 RBD (K417N, E484K, N501Y)	Beta , Botswana
	Spot 3	B.1.525; B.1.526; B.1.618; P.2; R.1	SARS-CoV-2 S1 RBD (E484K)	Eta, Iota , India, Zeta , Kentucky
	Spot 4	B.1.620	SARS-CoV-2 S1 RBD (S477N, E484K)	Europe
	Spot 5	-	<i>BSA</i>	-
	Spot 6	-	<i>BSA</i>	-
	Spot 7	B.1.1.7+E484K; P.3	SARS-CoV-2 S1 RBD (E484K, N501Y)	U.K., Philippines
	Spot 8	B.1.258.17; B.1.466.2	SARS-CoV-2 S1 RBD (N439K)	Indonesia
	Spot 9	AY.3; AY.4; AY.5; AY.6; AY.7; AY.12; AY.14; B.1.617.2; B.1.617.2+Δ144	SARS-CoV-2 S1 RBD (L452R, T478K)	Delta sub-lineages, Vietnam
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan

SARS-CoV-2 Panel 17	Spot Location	Lineages	Antigens	Common Designation
Human K15524U (IgG) K15525U (IgM) K15526U (IgA) K15527U (ACE2) Mouse K15528U (IgG) K15529U (IgM) K15530U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1	SARS-CoV-2 Spike (D614G)	-
	Spot 3	A (WT)	SARS-CoV-2 Nucleocapsid	Wuhan
	Spot 4	B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14	SARS-CoV-2 Spike (B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14) Alt Seq 1	Delta sub-lineages
	Spot 5	-	<i>BSA</i>	-
	Spot 6	-	<i>BSA</i>	-
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	A (WT)	SARS-CoV-2 S1 RBD	Wuhan

Note: Alternative S-GENE mutations for Spike of B.1.617.2 are listed as "Alt Seq #."



SARS-CoV-2 Panel 18	Spot Location	Lineages	Antigens	Common Designation
Human K15532U (IgG) K15533U (IgM) K15534U (IgA) K15535U (ACE2) Mouse K15536U (IgG) K15537U (IgM) K15538U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	P.2	SARS-CoV-2 Spike (P.2)	Zeta
	Spot 3	B.1.617.1	SARS-CoV-2 Spike (B.1.617.1)	Kappa
	Spot 4	B.1.617.2; AY.4	SARS-CoV-2 Spike (B.1.617.2; AY.4) Alt Seq 2	Delta sub-lineages
	Spot 5	B.1.617.3	SARS-CoV-2 Spike (B.1.617.3)	India
	Spot 6	B.1.617	SARS-CoV-2 Spike (B.1.617)	India
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	B.1.526.1	SARS-CoV-2 Spike (B.1.526.1)	New York

Note: Alternative S-GENE mutations for Spike of B.1.617.2 are listed as "Alt Seq #."

SARS-CoV-2 Panel 19	Spot Location	Lineages	Antigens	Common Designation
Human K15540U (IgG) K15541U (IgM) K15542U (IgA) K15543U (ACE2) Mouse K15544U (IgG) K15545U (IgM) K15546U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1.621	SARS-CoV-2 Spike (B.1.621)	Mu
	Spot 3	AY.2	SARS-CoV-2 Spike (AY.2) Alt Seq 1	Delta sub-lineage
	Spot 4	B.1.617.2; AY.4	SARS-CoV-2 Spike (B.1.617.2; AY.4) Alt Seq 2	Delta sub-lineages
	Spot 5	C.37	SARS-CoV-2 Spike (C.37)	Lambda
	Spot 6	AY.12	SARS-CoV-2 Spike (AY.12)	Delta sub-lineage
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	AY.1	SARS-CoV-2 Spike (AY.1) Alt Seq 1	Delta sub-lineage
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14	SARS-CoV-2 Spike (B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14) Alt Seq 1	Delta sub-lineages

Note: Alternative S-GENE mutations for Spike of AY.1, AY.2, and B.1.617.2 are listed as "Alt Seq #."

SARS-CoV-2 Panel 20	Spot Location	Lineages	Antigens	Common Designation
Human K15551U (IgG) K15552U (IgM) K15553U (IgA) K15554U (ACE2) Mouse K15555U (IgG) K15556U (IgM) K15557U (IgA)	Spot 1	A (WT)	SARS-CoV-2 Spike	Wuhan
	Spot 2	B.1.617.2 +4	SARS-CoV-2 Spike (B.1.617.2 +4)	Delta +4
	Spot 3	B.1.617.2 +3	SARS-CoV-2 Spike (B.1.617.2 +3)	Delta +3
	Spot 4	B.1.617.2; AY.4	SARS-CoV-2 Spike (B.1.617.2; AY.4) Alt Seq 2	Delta sub-lineages
	Spot 5	B.1.617.2 +2	SARS-CoV-2 Spike (B.1.617.2 +2)	Delta +2
	Spot 6	B.1.617.2 +1	SARS-CoV-2 Spike (B.1.617.2 +1)	Delta +1
	Spot 7	P.1	SARS-CoV-2 Spike (P.1)	Gamma
	Spot 8	B.1.1.7	SARS-CoV-2 Spike (B.1.1.7)	Alpha
	Spot 9	B.1.351	SARS-CoV-2 Spike (B.1.351)	Beta
	Spot 10	B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14	SARS-CoV-2 Spike (B.1.617.2; AY.3; AY.5; AY.6; AY.7; AY.14) Alt Seq 1	Delta sub-lineages

Note: Alternative S-GENE mutations for Spike of B.1.617.2 are listed as "Alt Seq #."

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