

Fact Sheet

SARS-CoV-2 Antigen Variants

**NEW SARS-COV-2
MUTATIONS NOW AVAILABLE!**

Full-length Trimeric Spike Antigen Variants

Omicron, Delta, Kappa, Wild-Type, Alpha, Beta, Gamma, Epsilon & ETA

Why is this so important?

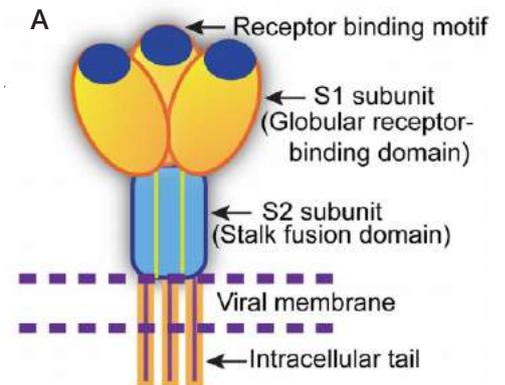
- ▶ Canadian Life Science supplies Spike Antigen of the latest and SARS-CoV-2 mutant strains. All variants are full-length antigens, which are active in their native trimeric form and stabilized in LMNG detergent.
- ▶ We are the only supplier, to scale, of the native, wild-type Trimeric Spike Antigen, which has been independently validated with an accuracy of >99% in the large-scale manufacturing of COVID-19 lateral flow antigen tests in the EU.

Key Info

SARS-CoV-2 Full-Length Trimeric Spike Antigens available now:

- ✓ Omicron (South African) Variant (B.1.1.529 Mutations)
- ✓ Delta (Indian) Variant (B.1.617.2 Mutations)
- ✓ Kappa (Indian) Variant (B.1.617.1 Mutations)
- ✓ ETA (Double UK & Nigeria) Variant (B.1.525 Mutations)
- ✓ EPSILON (U.S. California) Variant (B.1.429 Mutations)
- ✓ GAMMA (Brazilian) Variant (P.1 Mutations)
- ✓ BETA (South African) Variant (w B.1.351 RBD Mutations)
- ✓ ALPHA (UK) Variant (B.1.1.7 Mutations)
- ✓ Wild-Type

Host: Expi HEK293 Cells, **Full-length sequence:** (aa 1 – 1273),
Tag: C-terminal, **Furin cleavage site:** "RRAR" mutated to "GSAG",
Buffer: 20 mM Hepes pH 7.5; 150 mM NaCl, 0.001% LMNG,
Size: 1286 amino acids, **Purity:** > 98% by SDS-PAGE gel,
Native Trimeric MW: ≈426 kDa



(A) Cartoon depicts key features and the trimeric structure of the SARS-CoV-2 S protein.

Product Name	100 µg Pack	1 mg Pack	10 mg Pack
Omicron Variant	BSV-COV-OM-0.1	BSV-COV-OM-1	BSV-COV-OM-10
'Delta' (Indian) Variant (B.1.617.2 Mutations)	BSV-COV-PR-97	BSV-COV-PR-98	BSV-COV-PR-99
'Kappa' (Indian) Variant (B.1.617.1 Mutations)	BSV-COV-PR-92	BSV-COV-PR-94	BSV-COV-PR-95
'Alpha' UK Variant (B.1.1.7 Mutations)	BSV-COV-PR-65	BSV-COV-PR-67	BSV-COV-PR-89
'Beta' South African Variant (w B.1.351 RBD Mutations)	BSV-COV-PR-61	BSV-COV-PR-63	BSV-COV-PR-88
'Gamma' Brazilian Variant (P.1 Mutations)	BSV-COV-PR-69	BSV-COV-PR-71	BSV-COV-PR-90
'ETA' UK/Nigerian Variant (B.1.525 Mutations)	BSV-COV-PR-79	BSV-COV-PR-86	BSV-COV-PR-87
'Epsilon' CAL.20C/California Variant (B.1.429 Mutations)	BSV-COV-PR-82	BSV-COV-PR-84	BSV-COV-PR-85
Wild-Type	BSV-COV-PR-33	BSV-COV-PR-34	BSV-COV-PR-35

Multi-Pack Offer: 6 Variants & Wild-Type

(Delta, Kappa, Alpha, Beta, Gamma, Epsilon, ETA and Wild-Type)

**Offer - BUY 7 FOR
THE PRICE OF 5**

1mg each
BSV-COV-PR-MP-1

Fact Sheet

SARS-CoV-2 Antigen Variants

NEW SARS-COV-2 MUTATIONS NOW AVAILABLE!

Full-length Trimeric Spike Antigen Variants

Omicron, Delta, Kappa, Wild-Type, Alpha, Beta, Gamma, Epsilon & ETA

Ordering Info:

- ▶ Availability: In stock available to order now!
- ▶ Capacity : 3g per month

- ▶ Shipping: Dry ice | Storage: -80°C. Avoid freeze-thaw cycles.
- ▶ Click here to order E: info@lifescience.ca
T: 1.888.226.2775

Key Variant Differences

	Omicron (South African) Variant	Delta (Indian) Variant	Kappa (Indian) Variant	Alpha (UK) Variant	Epsilon (California) Variant	Beta (South African) Variant	Gamma (Brazilian) Variant	ETA (UK/Nigeria) Variant
Name	Omicron (South African) Variant	Delta (Indian) Variant	Kappa (Indian) Variant	Alpha (UK) Variant	Epsilon (California) Variant	Beta (South African) Variant	Gamma (Brazilian) Variant	ETA (UK/Nigeria) Variant
Pango	B.1.1.529	B.1.617.2	B.1.617	B.1.1.7	B.1.429	w B.1.351 RBD Muts	P.1	B.1.525
Alt. Name					CAL.20C	501Y.V2	B.1.1.28.1	
Classification	Variant of Concern	Variant of Concern	Variant of Interest	Variant of Concern	Variant of Interest	Variant of Concern	Variant of Concern	Variant of Interest
Detected	South Africa: Nov 2021	India: Dec 2020	India: Dec 2020	UK: Feb 2020	US: Jun 2020	South Africa: Oct 2020	Japan/Brazil: Dec 2020	UK/Nigeria: Dec 2020
Trimeric MW	≈426 kDa	≈426 kDa	≈426 kDa	≈426 kDa	≈426 kDa	≈426 kDa	≈426 kDa	≈426 kDa
DELETIONS								
69-70	69-70			69-70				69-70
114				114		114		114
143-145	143-145							
157-158		157-158						
211	211							
MUTATIONS								
K417N	K417N					K417N	K417N	
L452R		L452R	L452R		L452R			
E484K						E484K	E484K	E484K
E484Q		E484Q	E484Q					
N501Y	N501Y			N501Y		N501Y	N501Y	
D614G	D614G	D614G	D614G	D614G		D614G		
P681H/P681R	P681H	P681R	P681R	P681H		P681H		
T716I				T716I		T716I		
S982A				S982A		S982A		
UNIQUE								
	A67V, T95I, L212I, INS 214EPE, G339D, S371L, S373P, S375F, N440K, G446S, S477N, T478K, E484A, Q493K, G496S, Q498R, N501Y, Y505H, T547K, N679K, N764K, D796Y, N856K, Q954H, N969K, L981F	T19R, D950N, K986P, V987P	Q1071H, E154K	A570D	S13I, W152C, D1183Y		L18F, T20N, P26S, D138Y, R190S, T1027Y, V1176F	Q52R, Q677H, F888L

Mutations in bold are associated with less sensitivity to antibody neutralisation

Applications

- ELISA Assays / Kits
- Ligand / Antibody Binding Assays
- Biochemical and Biophysical Analyses
- Size, purity and oligomerization state of SARS-CoV-2 spike protein assessed by SDS-PAGE (>98% Purity), Western Blot using a tag-specific antibody
- Purification: Tag-specific Agarose
- Lateral Flow Assays